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AN

EPHEMERIS

OF

MATERIA MEDICA, PHARMACY,

THERAPEUTICS

AND

COLLATERAL INFORMATION.

JANUARY, 1903.

E. R. SQUIBB & SONS,

BY

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BRIEF COMMENTS ON THE MATERIA MEDICA, PHARMACY AND THERAPEUTICS OF THE YEAR ENDING JULY 1, 1902.

By E. H. Squibb, M.D.

ALPHABETICALLY ARRANGED.

It may be quite confidently stated that there has been during the past year a possibly slow but very decided revulsion in the medical profession, at least in some quarters, against the efforts of a few enthusiasts to press forward the claims of some new products. This apathy of the profession to their claims has had a wholesome effect in general and yet cannot be claimed to have necessarily retarded investigations on rational lines. The medical profession is now judiciously looking back over the line of agents already tried and found of sufficient value, in order to continue its investigation with such which have been suddenly and unwisely dropped for the very much newer products which were loudly proclaimed by advertisement and otherwise to be efficient substitutes or "sure cures."

Acacia, or true Gum Arabic, still continues to be of more than passing interest aside from its well-established usefulness, in that the question of detection of spurious gums has been quite prominent during the past year. It will interest some no doubt to

read the information obtained by Dr. H. C. Wood of Philadelphia, Penn. when visiting the region which is the natural source of this Gum. Dr. Wood has been travelling for some months through different parts of the world and writes as follows:

"Assouan, Upper Egypt, January 21st.

To the Editor of the American Journal of Pharmacy:

Through the kindness of Daoud Takla, American Consul, I have had opportunity of inspecting the senna and gum arabic as they are bought by the merchants of this place, and of learning about their commercial history. According to the chief merchant—a most notable follower of the Prophet, over 6 feet tall, black as the darkness in the Mammoth Cave, dignified and courteous as becomes a man of his high local position—the trade, since the destruction of the hosts of the Mahdi, has become as active as it was before his misrule, with the difference that camels no longer bear their burdens into Assouan, having been superseded by the less picturesque but more practical railroad. The saving of cost to some one must be great, as from some districts nearly a whole year was formerly required for the transit. The gum arabic is bought of the natives by travelling merchants, sorted into three varieties, packed into large sacks made of palm leaf and sold to the merchants here, who hold it until notified by telegram from Cairo that the market is favorable, when they ship it down the Nile. I was told that the gum is gathered sometime during the months of January, February and March, each collector having vested rights in a certain portion of the forest. Long incisions are made vertically through the bark and the exuding gum allowed to harden before gathering; in this way, the trees not being injured, the collections can go on year after year. It is affirmed that in Upper Egypt the gum arabic tree flourishes when watered, but fails to yield gum. The warehouses of the merchants of Assouan would hardly suffice in Philadelphia, being simply rectangles surrounded by walls about ten feet high, made of dried mud. In these roofless enclosures sacks or mats containing many thousands of pounds of the gum were piled one upon another. The finest variety of the gum is a very white, beautiful article.

Yours truly,

H. C. Wood."

(*Amer. Journ. of Pharmacy,* Vol. 74, p. 201).

Acetanilid (Phenyl-Acetamide) has lost none of its prominence during the past year, and has evidently settled down as one of the reliable synthetic products which have come to stay.

Dr. Thurston G. Lusk of New York City has used the following combination of Acetanilid, Zinc Oxide and Iodized Starch in the form of a *paint,* in a variety of skin diseases with most gratifying results. The formula he uses is:

Acetanilid.	4 grammes	(about 60 grains)
Zinc Oxide.	12 "	(" 180 ")
Iodized Starch 5%....	16 "	(" 240 ")

He recommends the combination as a valuable antiseptic, astringent and protective agent in cases of eczema, ulcers, dermatitis from all causes, including superficial burns, impetigo, sycosis, herpes zoster and chancroids. (*Journ. of Cutan. and Genito-Urin. Diseases,* Vol. XIX, p. 574).

Of the cases of poisoning with this agent, the following only will be mentioned here as typical of the already too many cases now being recorded.

Dr. Samuel E. Earp of Indianapolis, Ind. reports "A Case Resembling Morbus Caeruleus, Probably Due to a Dusting Powder Containing Acetanilid." (*Pediatrics,* Vol. XII, p. 93).

Dr. Edward A. Tracy of Boston, Mass. read the above account and it brought to his mind a case treated by himself several years previous but never published. The case was that of a baby a few days old who had developed a rawness on the buttocks, on which Acetanilid and zinc stearate were dusted several times during the 24 hours. (*Pediatrics,* Vol. XII, p. 385).

Dr. Francis T. Stewart of Philadelphia, Penn. reports two cases of toxic effects when using as a dusting powder on abraded surfaces. He concludes: "I do not know of a fatality following the external use of this drug, but can conceive its possibility, especially if the patient be debilitated from age or disease." (*Phila. Med. Journ.,* Vol. 8, p. 379).

Dr. Philip King Brown of San Francisco, Cal. reports "A Fatal Case of Acetanilid Poisoning" in a shoemaker 37 years old who had been given by a lodge physician 4 grammes (60 grains) in six powders for his headache, and he had taken them all within a few hours before his regular attending physician was called. A very careful account is given of this man whose fatal termina-

tion did not occur until six days after his entrance into the hospital. A card tracing of his respiration and the pulse and rectal temperature are given. A microscopic examination of his blood was made. The account gives the microscopic appearance in two very clear cuts, as well as a table of the differential counts of corpuscles. The article concludes with a record of the autopsy eight hours after death. (*Amer. Journ. of Medical Sciences,* Vol. CXXII, p. 770).

Acetopyrin (the somewhat recent combination of Antipyrin and Aspirin) has not been found in the current medical literature of the past year.

Acid Acetic has not decreased in importance either in the medicinal or commercial line. Large quantities continue to be made and a high standard maintained. A report comes from abroad giving it a special use as a preventive of infection.

Dr. Luigi de Gaetano of Naples, Italy has written an article on "Alcohol Acidified with Acetic Acid in the Treatment of Wounds Healing by First Intention." The plan is to soak the sutures in a solution of 20 drops of Acetic Acid to 100 grammes of grain alcohol while the operation is going on, and then dry them by sterilized gauze just before making use of them. The after dressings are also wetted with this acidified alcohol. (*La Riforma Medica,* 1st Volume for 1902, p. 603).

Acetic Acid as a menstruum for the exhaustion of drugs has maintained its interest and importance throughout the past year. Another year's experimental work with its use in this line has not only increased the estimate of its value as an extractive agent, but has confirmed in a marked degree its character as a preservative. It may now be very safely stated in looking back over the whole field covered that it is in every way quite the equal of the alcoholic menstruum of the U. S. Pharmacopoeia in the preparation and preservation of quite all the fluid extracts. Observation has naturally been carried on more critically with the fluid extracts of the alkaloidal drugs, and particular attention has been paid to such important ones as Aconite Root, Belladonna Root, Coca, Conium, Cinchona, Digitalis, Hyoscyamus, Ipecac, Nux Vomica and Wild Cherry, so that side by side with the alcoholic fluid extracts they all have continued to retain their alkaloidal value, at least for the past two years. From these data it may be quite safely reasoned that they will continue to be as stable as the

alcoholic fluid extracts and that they will keep quite indefinitely. For those who are still interested in following up this subject, the same table of drugs given here last year is again presented. No apparent change has yet taken place in the general appearance of these Acetic Fluid Extracts during the past year. Those then marked "turbid" (with one exception, Wild Cherry) must still be classed as "turbid", but there is no apparent increase in the turbidity. The noticeable mellowness spoken of last year in these sample fluid extracts has not only been maintained but has increased in some cases so that "ageing" is an important element in their palatability.

Drug.	Liquid Portion, Per cent.	Deposit, Per cent.	Condition.
Aconite Root	99	1	Clear
Allspice	98	2	"
Arnica Root	99	1	Turbid
Aromatic Powder	95	5	"
Belladonna Leaf	95	5	Clear
" Root	98	2	"
Bittersweet	98	2	"
Black Pepper	95	5	"
Buchu	99	1	"
" and Potassium Acetate	99	1	"
Buckthorn	99	1	"
Burdock	99	1	"
Calumba	95	5	Turbid
Cannabis Indica	99	1	Clear
Capsicum	98	2	"
Cardamom	99	1	"
Cascara Sagrada	99	1	"
" " Aromatic	97	3	"
Cassia, Saigon	98	2	"
Celery	99	1	"
Cimicifuga	99	1	"
Cinchona, Red Compound	98	2	"
" "	98	2	"
" Yellow	98	2	"
" " Compound	98	2	"
Cinnamon Ceylon	25	75	Tendency to Gelatinize
Cloves	98	2	Clear
Coca	97	3	"
Colchicum Seed	99	1	"

Drug.	Liquid Portion, Per cent.	Deposit, Per cent.	Condition.
Conium	98	2	Turbid
Convallaria	98	2	Clear
Coriander	99	1	"
Cotton Root	97	3	"
Cypripedium	99	1	"
Dandelion	99	1	"
Digitalis	95	5	"
Ergot	99	1	"
Eucalyptus	98	2	"
Garlic	92	8	"
Gelsemium	99	1	"
Gentian	95	5	"
" Compound	95	5	"
Ginger, Jamaica	95	5	"
Hops	98	2	"
Hydrangea	98	2	"
Hydrastis	98	2	"
Hyoscyamus	95	5	"
Ipecac	92	8	"
Juniper	92	8	"
Larkspur, Delphinium	99	1	"
Leptandra	99	1	"
Lobelia	99	1	"
Mace	98	2	Turbid
Malt	99	1	Clear
Marjoram	99	1	"
Nutmeg	99	1	"
Nux Vomica	99	1	"
Pareira	97	3	"
Phytolacca	98	2	"
Pilocarpus	97	3	"
Pleurisy Root	98	2	"
Prickly Ash	99	1	"
Quassia	97	3	"
Rhatany	98	2	"
Rhubarb	98	2	"
Sanguinaria	99	1	"
Sarsaparilla	97	3	"
" Compound	97	3	"
Scullcap	95	5	"
Senega	88	12	Turbid and Gelatinizing
Senna	95	5	Clear
" Compound	98	2	"

Drug.	Liquid Portion, Per cent.	Deposit, Per cent.	Condition.
Serpentaria	98	2	Clear
Spigelia	99	1	"
" and Senna	98	2	"
Squill	98	2	"
Stillingia	95	5	"
Stramonium Seed	95	5	Turbid
Tarragon	98	2	Clear
Thyme	99	1	"
Tobacco	98	2	"
Triticum	98	2	"
Uva Ursi	97	3	"
Valerian	98	2	"
Veratrum Viride	95	5	"
Wild Cherry	95	5	"
Yellow Dock	99	1	"

During the past year, eleven new Fluid Extracts have been added to the above list. Their present condition is given below. These also will be kept for at least a year to be reported on at that time, as on previous occasions.

Drug.	Liquid Portion, Per cent.	Deposit, Per cent.	Condition.
Avena Sativa	98	2	Clear
Benne Leaf	98	2	"
Bitter Root	98	2	Turbid
Chilidonium	98	2	Clear
Eupatorium	98	2	"
Passiflora	98	2	"
Saw Palmetto	98	2	"
Solanum Carolinense Fructus	98	2	"
" " Radix	98	2	"
Stillingia Compound	98	2	"
Zea	99	1	"

Acid Cacodylic (Di-Methyl Arsenine [Cacodyl] Hydrate) —the new organic arsenical compound containing the equivalent of 71.4 per cent. of arsenic oxide (known as arsenous acid)—has been accorded fully as much attention during the past year as in the previous one, but its use has been confined almost entirely to the Sodium Salt and not to the Acid. More than one writer has

called attention to the rather loose way in which some observers allude to the use of the Acid when the Salt is usually the form employed. It apparently is not received with as much enthusiasm as when first reported from France, but undoubtedly there appears to be a sufficient number of applicable cases to warrant its retention as an agent of some value.

Dr. C. Molon of Padua, Italy has made quite a study of the effects of the sodium salt, particularly upon the elimination of phosphorus by the system. (*Gaz. degli Osped. e delle Cliniche,* Vol. XXII, p. 900).

Dr. Armand Gaûtier of Paris, France whose earlier observations have already been recorded has recently studied the question of the intolerance of the sodium salt, and enumerates the symptoms to be noted.

He advocates the use jointly of two special prescriptions containing Chloride of Sodium and Iodide and Bromide of Potassium, together with other salts to counteract the disagreeable symptoms.

Dr. A. Heffter of Berne, Switzerland has made a study of the quantitative estimation of arsenic and Cacodylic Acid in the urine and reports in an article entitled "The Behavior of Cacodylic Acid in the Organism." (*Archiv. für Experiment. Pathol. und Pharmokol.,* Vol. 46, p. 230).

Dr. Thomas R. Fraser of Edinburgh, Scotland read a paper before the Edinburgh Medico-Chirurgical Society on March 5th last on "The Relative Inefficacy of Cacodylates as Therapeutic Agents." He concludes that the main result which has been arrived at is "that the compounds of Cacodylic Acid are apparently useless for producing the therapeutic effects of arsenic. (*Brit. Med. Journ.,* Vol. I for 1902, p. 712).

Dr. Charles William Heitzman of Denver, Colo. writes on "Arsenic and Its Compounds; with Special Reference to Soda Cacodylate." He gives brief histories of six of his cases in which it has been of decided benefit. (*Med. News,* Vol. 79, p. 244).

The intravenous injection of Sodium Cacodylate has been taken up more energetically during the past year.

Dr. Anelli of Piacenza, Italy reports an advanced case of pulmonary tuberculosis in which the injection produced good results. He made use of a solution of 50 milligrammes ($\frac{4}{5}$ grain) of Sodium Cacodylate in 1 Cc. (16.2 minims) of sterilized water, injected daily. (*La Riforma Medica,* third part for 1901, p. 196).

Dr. F. Mendel of Essen, Prussia relates his experience in over 400 cases of intravenous injection of Sodium Cacodylate, and concludes that it is a perfectly safe and very efficient means of obtaining the full therapeutic effects of arsenic. In cases of anemia and chlorosis in which the treatment was kept up from four to six weeks, he obtained results which he had not before observed with iron in any of its forms. (*Therap. Monats.,* Vol. XVI, p. 178). He has also met with success in the use of the following by the mouth:

Sodium Cacodylate.	2 grammes	(30.9 grains)
Oil of Peppermint.	2 drops	
Simple Syrup.	24 grammes	(370.4 ")
Water sufficient to make 175 Cc.		(about 6 fluidounces)

The dose is 5 grammes (a teaspoonful) three times a day.

Dr. Paul Gallois of Paris, France reported at a meeting of the Paris Therapeutical Society on October 9th last his experience in the use of the Cacodylic medication in chronic bronchitis accompanied with severe asthma. He obtained very marked results by using the following formula:

Sodium Cacodylate.....	2 grammes	(about 30 grains)
Rum. 20	"	(" 5 drachms)
Simple Syrup. 20	"	(" 5 ")
Distilled Water. 60	"	(2 fluidounces)
Essence of Peppermint..1 or 2 drops		

This was given in 5 gramme (1 teaspoonful) doses after each meal for ten days followed by an interruption of ten days. He found it of value in other affections as well. (*Bull. Gén. de Thérap.,* second half of 1901, p. 878).

Dr. Burlureaux of Paris, France has had Cacodylic medication under careful observation for a year or so past and now reports at a meeting of the French Society of Dermatology and Syphilography on March 6th last that it cannot be compared with the usual forms of arsenic medication, and looks forward to continued success in the future, particularly with intramuscular injections of Quinine Cacodylate. (*Annal. de Derm. et de Syphyl.,* Vol. III, p. 255).

At variance with the report of some other observers in the use of this agent in cases of inoperable carcinoma Dr. Lucien Le Roy of

Paris, France reports a case of cancer of the lung "cured" in a few days' time after the use of arsenic and quinine simultaneously. The quinine was injected in the form of Quinine Hydro-Chlor-Sulphate and the Sodium Cacodylate was given by injection. He adds that he will continue his observations not only on the human subject but particularly at the Veterinary College at Alford, England. (*Bull. de L'Acad. de Méd.,* Vol. XLVII, p. 5).

Dr. Ernesto Skultecki of the Civil Hospital of Sampierdarena reports that he finds that not only Sodium Cacodylate has no appreciable beneficial effect in surgical tuberculosis but it even may be harmful. (*Gaz. degli Osped. e delle Cliniche,* Vol. XXII, p. 1030).

Dr. Quelmé of Faon (Finistére) reports that he has seen but little benefit from the use of Sodium Cacodylate in tuberculosis, but does find some satisfaction in "Cacodylic Medication in the Scrofulous." He treated 30 cases of scrofula in children as well as in adults after many of them had been under ordinary treatment for some time without success. He believes in the plan of intermission in its use. (*Bull. Gén. de Thérap.,* Vol. CXLII, p. 312).

The Magnesium Cacodylate has been recommended on account of its relatively large proportion of Cacodylic Acid and its ready solubility in water. One gramme of this Salt represents 920 milligrammes of Cacodylic Acid, whereas the Sodium Salt only represents 700 milligrammes.

In the treatment of syphilis by subcutaneous injections, the use of a Mercury Iodo-Cacodylate has been recommended.

Guaiacol Cacodylate is one of the most recent forms, and appears to be simply a mixture of the two ingredients in molecular proportions.

Acid Carbolic (Phenol) is somewhat recovering from the shock occasioned by the unusual number of poisoning cases following chiefly its external use. It was recorded here last year as being found useful as an internal remedy to an increasing extent, and it is still in favor.

Dr. S. Henry Dessau of New York City reported his observations last year and now once more calls attention to its definite value as an internal remedy. This was in the form of a paper read before the Medical Society of Greater New York on June 1st, 1902. He states that his experience with its internal use began as far back as 1894. He introduces his present article as follows: "It is perfectly natural that there should exist among the profession at large

a feeling of incredulity and hesitation concerning the virtues of a remedy whose reputation is so closely associated with a history of criminal poisoning, to say nothing of our early prejudices founded upon false interpretations of its physiological manifestations.

It is chiefly therefore for this reason that I wish to record my personal experience as to its therapeutic effects, and so, if possible, encourage and induce others either to confirm or disprove and reject my own observations."

His use of it "has been chiefly in the treatment of catarrhal complaints involving the respiratory tract." He continues: "All such cases as these have been treated almost entirely with the one remedy —carbolic acid, with better and quicker results than any other treatment I have used, and these have been many. Especially are the results most satisfactory in those cases where it is almost impossible to keep the little patients in bed. The method of administering carbolic acid, I think safest in the form of a solution of the strength of 1, 2, 3 and 5 per cent. The dose given is according to the age of the patient—an infant under one year of age receiving a teaspoonful of the 1 per cent. solution every two hours, while a child of five years may get the same dose of a 5 per cent. solution. A small amount of glycerine aids in preparing a more complete solution, and lately I have used cinnamon water as an expedient to aid in disguising the pungency of the acid. Only the chemically pure acid should be ordered for internal use. The mothers are always told that the medicine smells of carbolic acid. This is done to allay any suspicion that a mistake in dispensing might have been made." His closing sentence reads as follows: "The only idiosyncrasy observed against its use has been that of vomiting." (*Pediatrics,* Vol. XIV, p. 212).

Drs. William B. Coley and Preston A. Satterwhite of New York City have reported their observations on "The Radical Cure of Hydrocele by Minute (two-minim) Injections of Carbolic Acid" before the Section in General Surgery of the New York Academy of Medicine on January 11th last, relating nine cases in detail. In their concluding remarks they state: "Our series of cases, though not a large one, is sufficient, we think, to show that practically just as good results may be obtained by using two minims of carbolic acid instead of from thirty to ninety." (*N. Y. Med. Journ.,* Vol. LXXV, p. 537).

Dr. George W. Gay of Boston, Mass. reports on "The Treat-

ment of Piles by the Injection of Carbolic Acid", in the form of a weak solution—not to exceed 10%. "*Internal* piles are the only ones that should ever be subjected to this method of treatment. Those piles which are above the internal sphincter, or which will remain there, when so placed, are the proper ones, and, so far as the writer knows, the only variety that will yield satisfactory results from the treatment by injection. This point is of vital importance to the success of the operation. External piles are made worse by the procedure, as they swell up, and are sorer and more troublesome in every way after injection.....

By way of summary it may be said, that if the following points receive careful attention, relief, more or less complete, is pretty certain to follow this operation; a relief that in some cases will result in a permanent cure: (1) Inject only *internal* piles; (2) the solution of carbolic acid should not exceed 10%; (3) do not repeat the operation under a week; (4) inject only one or two minims into each tumor; (5) inject not more than two piles at any one time; (6) promise relief only, and not a radical or a permanent cure." (*Boston Med. and Surg. Journ.,* Vol. CXLV, p. 628). Dr. Gay afterward made a correction in the formula as first printed. (*Boston Med. and Surg. Journ.,* Vol. CXLV, p. 725).

Drs. von Bruns and Honsell of Tübingen, Germany reported "On the Behavior of Pure Carbolic Acid in Septic Wounds and Suppurative Processes." They carried on their experiments upon dogs and men, and found that concentrated Carbolic Acid was far less apt to show poisonous symptoms than the diluted Acid. Beside treating cases of hydrocele it was employed in 80 cases of septic processes in which even one application showed favorable action. (*Archiv. für klin. Chirurg.,* Vol. 64, p. 193).

From veterinary practice comes the report of Dr. Charles F. Dawson of Lake City, Fla. on the "Treatment of Malignant Oedema with Carbolic Acid, with remarks upon 'Leeches' or Bursattee." (*Journ. of Compar. Med. and Veter. Archives,* Vol. XXIII, p. 301).

Dr. Louis H. Mutschler of Philadelphia, Penn. publishes "A Report of Two Cases of Facial Anthrax Treated by Injections of Carbolic Acid, with Recovery." (*Annals of Surgery,* Vol. XXXIV, p. 555).

Dr. David Smart of Liverpool, England reported at a meeting of the Liverpool Medico-Chirurgical Society a case of "Tetanus

successfully treated with hypodermic injections of Carbolic Acid." (*Liverpool Medico-Chirurg. Journ.,* Vol. XXI, p. 399).

Dr. Enriquez reported for himself and Dr. Bauer at a meeting of the Paris Medical Society of Hospitals on December 20th last on the treatment of tetanus by Carbolic Acid injections in a woman showing symptoms of tetanus following a wound of the index finger. (*La Sem. Méd.,* Vol. 21, p. 429).

Dr. Kenneth E. Kellogg of New Britain, Conn. reports the case of a patient with tetanus treated by repeated subcutaneous injections of a one-half per cent. watery solution of Carbolic Acid and who recovered. The case was that of a girl of thirteen years old who had fallen on a barbed wire fence in a barnyard severely lacerating her right hand. (*Med. News,* Vol. 80, p. 419).

Dr. J. E. Musgrave of Handley, W. Va. adds one case to the thirty-four he says are already on record of the use of Carbolic Acid in tetanus. The treatment was kept up for two weeks and gave a sufficiently favorable result to call forth his conclusion that the "Treatment is reliable, costs little, and is always at hand." (*Merck's Archives,* Vol. IV, p. 13).

In an article read before the Buncombe (N. C.) County Medical Society at Asheville on June 2nd last Dr. Lawrence E. Holmes of Asheville, N. C. discussed the question of "Tetanus in the Light of Modern Treatment, with a Report of Three Cases." Carbolic Acid was one of the agents used, but he was forced to conclude that little reliance can be placed on any of the various methods which have been employed in the treatment of tetanus. He therefore makes the following plea: "In the face of all these methods, and knowing that in most cases the chances are against us whatever we do, what shall be our line of treatment when we meet a case of tetanus? ..... Antitoxin should be at once administered freely, and continued daily in large amounts, as frequently as the condition indicates.... At the same time I would strongly recommend the hypodermic use of Carbolic Acid, as I know of no reason why the two methods of treatment should not be tried at the same time." (*Amer. Med.,* Vol. IV, p. 332).

Dr. V. A. Niémtchenkov, a Russian military practitioner, reports on a new procedure in the treatment of granular conjunctivitis, successfully tried in 43 cases. He employed a 5% aqueous solution and used about one-quarter of the contents of an ordinary

Pravaz syringe, applying the solution at each angle of the upturned eyelid. Only one injection is usually necessary but two or three may be called for. From five to seven days are then allowed to go by before injecting the second eye or repeating the injections in the same eye. (*La Sem. Méd.,* Vol. 22, p. 184).

Dr. Samuel Theobald of Baltimore, Md. reports his "Observations Upon Recent Methods of Treating Corneal Ulcers, with Especial Reference to the use of Carbolic Acid as a Not Infrequent Substitute for the Actual Cautery." He states that he has "employed it with gratifying results in hypopyon ulcers (in the early stages, especially), in suppurating ulcers of traumatic origin following oyster-shell injuries, etc., and in dendritic keratitis, and that recently one of my colleagues, Dr. James Bordley, applied it to a threatening corneal ulcer complicating gonorrhoeal conjunctivitis, and which, it seems probable, was due to a secondary infection, with the result that the rapid progress of the ulcer was at once arrested and the process of repair quickly established." (*Amer. Journ. of the Med. Sciences,* Vol. CXXIII, p. 1074).

Dr. Torindo Silvestri, an Italian observer, extols the use of Carbolic Acid in pertussis and believes it outranks many of the other agents used. He not only uses it locally but internally and hypodermically in glycerin. (*Gaz. degli Osped. e delle Cliniche,* Vol. XXII, p. 1198).

Dr. L. Baumel of the University of Montpellier (France) also recommends the use of Carbolic Acid in pertussis. He uses a 25 per cent. solution in an atomizer and holds the spray away from the head of the patient for a distance of 1 to $1\frac{1}{2}$ metres (about $3\frac{1}{3}$ to 5 feet). This he repeats two or three times each day and finds that it either aborts or ameliorates the cough. (*Archiv. de Med. des Enfants,* Vol. V, p. 288).

Dr. Benjamin H. Brodnax of Brodnax, La. has been a strong advocate of this Acid in the treatment of burns and scalds. He now relates three more cases out of over one hundred he has on record. In this connection it will be of interest to record here his account of these three cases. The first was that of a woman whose foot was scalded throughout the entire upper surface, leaving it raw from four to five inches. He immediately spread the pure full strength Carbolic Acid with a feather all over the burned part. The pain ceased immediately and the old woman who was eighty years old and very fleshy remarked: "Doctor, the pain is gone and

it feels as if you were pouring cold water on it." The second case was that of an engineer. The entire under surface and one-half of the upper surface of his arm was completely scalded from one of the steam jets. The application was so satisfactory that he continued his work at the engine without laying off except during the time his wound was being dressed. Dr. Brodnax related his experience in thus treating burns to a fellow-practitioner in a neighboring city, but his friend was not convinced until he actually tried the experiment upon himself by burning off a small portion of the back of his own left hand with a blow-pipe flame from an alcohol lamp. To this burn he applied pure full strength Carbolic Acid and then frankly admitted in correspondence with Dr. Brodnax, that it had acted just as he had said it would. Some of Dr. Brodnax's cases were as extensive as two square feet of burned surface. From his observations he concludes that the Acid "forms a chemical combination with the serum of the blood and forms a thick white pellicle which covers the wound and thus excludes the air and prevents absorption." He lays special emphasis on the fact that only the strong Acid will produce this effect, and that a 5 or 10% solution will not only not have a beneficial effect but will even produce dangerous conditions. He has no unfavorable cases to report in his twenty years' experience for he has "yet to see the first unpleasant effect."

Dr. Fritz Hölscher of Mülheim, Prussia reports on fifteen cases of sciatica during his experience of ten years, all of which he treated with a 5 per cent. solution of Carbolic Acid. His plan was to expose the sciatic nerve and apply a gauze-tampon saturated with the 5 per cent. solution, for several sucessive days. His results were prompt and permanent in every case with only two recurrences —one after two years and the other after three years. (*Centralbl. für Chirurg.,* Vol. 29, p. 33).

Dr. Thomas Carwardine of Bristol, England reports on his method for "The Fixation of Moveable Kidney by Means of Strong Carbolic Acid; Six Cases." (London *Lancet,* Vol. I for 1902, p. 1822).

As a warning against the use of weak solutions of Carbolic Acid, Dr. Fischer of "Castrop" reports "Two Cases of Carbolic Acid Gangrene." They were cases in which the Carbolic Acid dressings were applied to wounds of the fingers. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1293).

Dr. John Glendon Sheldon of Telluride, Colo. reports a case of "Gangrene Following the Use of Carbolic Acid" in a colored coachman 37 years old who had applied a dilute solution of Carbolic Acid to a "sore" on one of his right toes. (N. Y. *Med. Record,* Vol. 60, p. 773). He later reports the following case which illustrates personal and family idiosyncrasy. It was that of a servant, unmarried, 26 years old who had applied a few drops of a 50 per cent. solution of Carbolic Acid to a corn situated on the outer side of the second toe of the left foot, which resulted in being a very severe case for the gangrene extended beyond the area brought in contact with the Acid. He remarks in connection with these cases: "The explanation of the occurrence of carbolic-acid gangrene cannot at present be satisfactorily given. It is not known why gangrene should occur in one case, and no injury to tissue take place in another individual treated in an identical manner. It is probable that the idiosyncrasy of the patient and the surrounding conditions play an important part in each case." (N. Y. *Med. Record,* Vol. 61, p. 534).

Dr. J. W. Wainwright of New York City reports a very interesting case of "Poisoning from the Application of Carbolic Acid to the Unbroken Skin." The patient was a man 50 years old weighing 225 pounds who applied quite freely a 4 per cent. solution of Carbolic Acid in water immediately following a hot bath, for the relief of pruritis. (*Boston Med. and Surg. Journ.,* Vol. CXLVI, p. 361).

Dr. Lawrence E. Holmes of Asheville, N. C. reports a case of "Unusual After Effects of a Snake Bite" in which an incision made where the two minute teeth punctures were seen was washed out with a 10 per cent. Carbolic Acid solution and the same solution used on the dressing. "The interesting point in this case is the cause of the motor and sensory paralysis". (*Phila. Med. Journ.,* Vol. 8, p. 459).

Dr. John Glendon Sheldon of Telluride, Colo. reviews the clinical cause of this case in order to suggest that the unusual symptoms might have been due to the use of Carbolic Acid. (*Phila. Med. Journ.,* Vol. 8, p. 581).

Dr. George W. Sargent of Seneca Castle, N. Y. comes to the conclusion that alcohol is "the most perfect, the most certain, and the most handy antidote to carbolic acid which we possess", in a paper read before the Ontario County Medical Society on "Car-

bolic Acid: Its Use and Abuse." (*Buffalo Med. Journ.,* Vol. XLI, p. 337).

Dr. Louis Buck of Portland, Oregon reports a case showing that undoubtedly "alcohol is a powerful antidote in the treatment of carbolic acid poisoning, but its specific effects are only observed when it is used immediately after the acid has entered the stomach, before absorption has taken place." (*Amer. Medicine,* Vol. II, p. 320).

Dr. S. R. Blatteis of Brooklyn, N. Y. adds his testimony in the external use of alcohol as an antidote to Carbolic Acid burns by relating a case. (*Amer. Medicine,* Vol. III, p. 814).

Dr. Francis E. Fronczak of Buffalo, N. Y. in reporting on "Treatment of a Carbolic Acid Poisoning" writes that: "No doubt the most common and most easily obtainable antidote of carbolic acid known at present writing is probably alcohol, whether in the form of a staple article or as brandy or whiskey." (*Buffalo Med. Journ.,* Vol. LVIII, p. 43).

Dr. David E. Wheeler of Buffalo, N. Y. writes an extended article on "The Treatment of a Person who has Swallowed a Poisonous Dose of Carbolic Acid." (*N. Y. Med. Journ.,* Vol. LXXV, pages 919 and 963).

Dr. G. A. Ferraby of Nottingham, England reports on the use of "Caffein as an Antidote to Carbolic Acid" used in hypodermic injections of 150 milligrammes (2.4 minims). (*La Sem. Méd.,* Vol. 21, p. 312).

Dr. I. S. Stone of Washington, D. C. reports on the subject of "Iodoform and Carbolic Acid Intoxication" and relates four cases. (*Amer. Journ. of Obstetrics,* Vol. XLV, p. 93).

In an interesting comparative table in which figures are given for nine years, it is satisfactory to find that the number of deaths in England "caused by Carbolic Acid was less in 1900 than in 1899, or any other year since 1893." (*Pharm. Journ.,* Vol. XIV, Fourth Series, p. 470).

Acid Picric (Tri-Nitro-Phenol) is still an important agent in the hands of the dermatologists. Saturated solutions of Picric Acid continue to be reported as of value in acute eczema and in erysipelas. It appears to relieve pain and burning sensation in some cases better than either carbolic acid or ichthyol.

Dr. Louis Maddock of California reports it as one of the most valuable in this line, and has used it in solutions of one-fifth of 1

per cent. to 5 per cent. He finds little or no danger from poisoning from absorption even after repeated applications over an extensive surface of the body. For burns and scalds of the first and second degrees, he finds it to be the best and most reliable agent in use. He claims it to be a specific in chilblains when used in a 1 per cent. solution. It is also of value in the treatment of the erythema produced by poison oak, in pruritus ani, moist eczema, cracked nipples, chapped hands and chronic ulcers. (*Occidental Med. Times,* Vol. XVI, p. 119).

Dr. Armand Siredey of Paris, France reports on the "Treatment of Gonorrheal Endometritis by Intra-Uterine Injections of Picric Acid", instigated by the success previously reported by Dr. H. De-Brun of Beyrout, Syria. (*Presse Medicale,* Vol. for 1902, p. 662).

Dr. Ernest R. Fothergill of Tunbridge Wells, England gives additional testimony as to the usefulness of a saturated solution of Picric Acid. Applied on linen cloths under oilskin or similar material, it "will act as a charm in erysipelas, as also in the inflamed and often ulcerated arms to be occasionally met with during vaccination." (*Brit. Med. Journ.,* Vol. I for 1902, p. 1602).

It is stated that a Ferric Picrate has been found of service in the treatment of prostatic hypertrophy, but a more extended report is awaited.

Agurin (a combination of Sodium Acetate and Sodium Theobromate) has not been commented upon to any great extent during the past year. Only one prominent observer apparently has reported on its use and he simply confirms the statement made a year ago by Dr. Destrée of Brussels, Belgium and alluded to here. This observer is Dr. Holle, whose experience lends support to the theory that its superiority over Diuretin is due to the additional amount of Theobromine in its composition. Diuretin contains 50 per cent. of Theobromine whereas Agurin contains 60 per cent. and is far less irritating to the stomach. It may be well to recall the fact that Agurin is a colorless and odorless powder, soluble in water and having an alkaline reaction. Dr. Holle speaks of its great value, especially in combination with Digitalis, in cardiac affections when complicated with dropsy, and where the kidneys are found to be in a sound condition. Again in chronic interstitial nephritis, he found it very useful. His smallest dose was 1 gramme (15.4 grains) and the maximum 3 grammes (46.3 grains). (*Muench. Med. Wochensch.,* Vol. XLIX, p. 775).

Aïrol (Bismuth Oxy-Iodo-Gallate) has not been commented upon in the current medical literature of the year with the exception of the Russian Journals. In Russia it has been used in the Army in comparison alternately with Iodoform very successfully, on 200 soldiers. Its advantages are in being non-toxic, without odor, without irritation to the wound, and its freedom from any tendency to produce eczema—all of which render it superior to Iodoform.

Alboferin is the name given to one of the newest combinations of Albumin with Iron. Its composition is as follows:

Albumin.	90.14	per	cent.
Iron.	0.68	"	"
Phosphoric Acid.	0.32	"	"
Mineral Matter.	8.86	"	"
	100.00	"	"

It is reported to be a light brown nearly odorless powder with a slight salty taste. It is readily soluble in cold water, producing a solution which is neutral in reaction and does not coagulate on heating.

Dr. Karl Fuchs of Vienna, Austria reports on its use in 14 cases, giving a short clinical account of each case, and enumerates its advantages as follows: It is agreeable to the patient, does not stain the teeth, does not produce constipation, does not disturb the digestion but rather increases the appetite. Ten were cases of chlorosis and four were of secondary anaemia. Marked improvement resulted in from 14 to 55 days. The haemoglobin increased 33 per cent., and the red blood cells and the body weight showed marked increase. (*Wien. klin. Wochensch.,* Vol. XV, p. 233).

Alsol (a combination of Aluminium with Acetic and Tartaric Acids) has not been commented upon in the current medical literature of the past year.

Amyloform (a combination of Formaldehyde with Starch) has been little heard of during the past year in the current medical literature.

Anæsthesia continues as a prominent topic in the current medical literature throughout the world.

The importance of educating a body of skilled anæsthetists still

forms a very prominent part of the discussion. In England, particularly, the regularly formed "Society of Anæsthetists" is a very select body, and at their regular meetings much of interest is discussed and practical results accomplished.

Dr. Dudley Buxton of England read a paper before this Society "On the Advisability of the Inclusion of the Study of Anæsthetics as a Compulsory Subject in the Medical Curriculum" which later produced practical results by making it compulsory on the student to pass at least the minimum experience in the administration of anæsthetics.

Dr. Frank E. Simpson of Chicago, Ills. gives some pertinent "Suggestions to Anæsthetizers." He enumerates and explains six requisites. (*Amer. Med.,* Vol. III, p. 354).

Dr. George DeTarnowsky of Chicago, Ills. follows this up with "Further Suggestions to Anæsthetizers", and enumerates seven requisites. (*Amer. Med.,* Vol. III, p. 636).

Dr. William Seagrove Magill of New York City has made a careful study of the differentiation between anæsthesia and analgesia, together with the modern methods of producing each. He includes the consideration of the prominent agents and their action in producing these results. (*Med. News,* Vol. 79, p. 531).

Dr. Harris Peyton Mosher of Boston, Mass. publishes some "Notes on the Management of the Anæsthetic in Operations on the Respiratory Tract" in which he illustrates by cuts the proper position to hold patients, especially children. (*Boston Med. and Surg. Journ.,* Vol. CXLVI, p. 84).

Dr. M. L. Maduro of New York City has made a study of "General Anæsthesia in the Plethoric." He states "that there are dangers connected with the administration of anæsthetics in the plethoric which can usually be overcome" by observing the suggestions he offers, thus enabling all "to experience satisfaction in selecting the most suitable narcotic." (*Med. News,* Vol. 80, p. 740).

The English have been especially interested during the past year in the discussion of the relative value of the two anæsthetics, Chloroform and Ether.

Mr. William Mitchell Banks a surgeon of Liverpool, England writes on his "Impressions About Chloroform and Ether." He lays great stress on not only the advantage but the necessity of having skilled anæsthetists and that they should teach the students in the medical schools. (London *Lancet,* Vol. II for 1901, p. 1323).

Dr. H. Challice Crouch the Anæsthetist and Mr. Edred M. Corner the Resident Assistant Surgeon of St. Thomas' Hospital (London) publish their conclusions on the question "Is Chloroform More Dangerous Than Ether?", and consider the respiratory troubles following operation during twelve months. (London *Lancet,* Vol. I for 1902, p. 1457).

Dr. W. Roger Williams of Clifton, Bristol, England gives a couple of interesting tables from Bartholomew's Hospital annual reports showing the death rate after the use of Chloroform and Ether from 1891 to 1900—10 years. (London *Lancet,* Vol. I for 1902, p. 1643).

Dr. Ed. Biousse of Paris, France calls special attention to the value of the "lid reflex" as an important sign of danger approaching in the anæsthesia produced by Chloroform. He emphasizes the fact that it is far more valuable than the pulse and respiration as an index. (*Gaz. des Hôp.,* Vol. 75, p. 301).

Dr. Ch. Valery of Paris, France calls attention to the rhythmic subluxations of the lower jaw in order to prevent Chloroform syncope. The rhythmic traction of the tongue of course has been made use of to accomplish this same result but he prefers the former. As the anæsthesia progresses the subluxations become more decided for the muscles are gradually relaxed. He also places great value on the "lid reflex" as stated by Dr. Biousse. (*Gaz. des Hôp.,* Vol. 75, p. 481).

Dr. Barette of Caen, France, in reporting his experience with Chloroform anæsthesia in patients with heart affections, emphasizes the necessity of the special training of students and the younger members of the profession in the proper administration of anæsthetics. By inference he strengthens his argument by stating that in over 6000 Chloroform anæsthesias under his guidance in twelve years, he has seen only three deaths. (*Journ. des Praticiens,* Vol. XVI, p. 131).

Dr. Friedrich Teweles of Vienna, Austria urges the more frequent employment of Ether intoxication rather than general anæsthesia for at least short operations. He describes his method of employing it by relating his experience in 157 cases. It appears to be especially applicable in opening up abscesses, breaking up anchyloses and cauterizing fissures. He points out how readily the administration can be pushed on to general anæsthesia when an exten-

sive operation is considered necessary. (*Wien. klin. Wochensch.*, Vol. XIV, p. 869).

Dr. P. Sudeck of Hamburg-Eppendorf, Germany reports in the same line in relating his further experience after operating in the first stage of Ether anæsthesia. He confirms the results obtained by Dr. Teweles, just alluded to, showing how much can be accomplished under the analgesia produced by the first few whiffs of Ether, and adds his own experience to this. He describes the condition of the patient as being in a similar "tipsiness" to that following alcohol drinking. The consciousness is retained but the sensation of pain is entirely abolished. (*Centralbl. für Chirurg.*, Vol. 29, p. 353).

Dr. J. von Mikulicz of Breslau, Prussia in reporting on "The Methods of Anæsthesia and Their Limitations" states that the most striking advance made during the last few years has been in the form of local anæsthesia. From his observations it would appear that at least in his section of the world local anæsthesia had displaced general anæsthesia in all simple operations. He even recommends its use for short laparotomies, such as gastrostomy. He goes so far as to state that it is his belief that general anæsthesia should only be produced when local anæsthesia is impossible. He believes that the decision should be left to capable men, and surely the anæsthetic should be administered by those with experience. He gives his statistics in the form of seven tables. (*Archiv. für klin. Chirurg.*, Vol. 64, p. 757).

Dr. Adolf Schmitt of Munich, Bavaria writing in the same line reports his experience in "Operations Upon the Abdomen Without Narcosis." He makes use of a 1 per cent. solution of Cocaine to produce the local anæsthesia and finds that usually 30 milligrammes (about $\frac{1}{2}$ a grain) of Cocaine in the form of such solution is quite sufficient for the most extensive operation. Among the operations in which he made use of such a solution were gastro-enterostomy, exploratory incision, incarcerated hernia, perityphylitic abscess and stone in the bladder. The only objections he finds to the general employment of local anæsthesia are the impossibility of securing complete relaxation of the abdominal muscles and the absence of anæsthesia in the peritoneum. He admits that the technique of local anæsthesia for such operations is still in quite an incomplete state. (*Muench. Med. Wochensch.*, Vol. XLVIII, p. 1210).

Dr. Walter C. Wood of Brooklyn, N. Y. read a paper before the Brooklyn Surgical Society recently on "Some Phases of Local Anæsthesia." He illustrates his points by relating the details of six of his cases. He has relied for ten years past on Cocaine solutions and considers 65 milligrammes (1 grain) to be well within the limits of safety, but has often used even up to 260 milligrammes (4 grains). He closes his remarks as follows: "The more one uses local anæsthesia the weaker will become his solutions while the quantity will be increased." (*Brooklyn Med. Journ.,* Vol. XVI, p. 289).

Dr. G. Alexander of Vienna, Austria in writing "On the Operative Evacuation of Mastoid Abscess with Schleich's Local Anæsthesia" reports eleven cases where general narcosis was contraindicated. (*Wien. klin. Wochensch.,* Vol. XIV, p. 782).

Dr. Rudolph Matas of New Orleans, La. now adds some additional points to his past experience in "Massive Infiltration Anæsthesia with Weak Analgesic Solution (Modified Schleich Method)", as well as an improvement in his apparatus of which he gives two very clear cuts in illustration. He remarks that "The contrast between this method and the older, in which the ordinary hand-syringes of small capacity are used, is agreeably apparent, and will be readily appreciated by anyone who has been operating by the classic methods." (*Amer. Medicine,* Vol. II, p. 1027).

Dr. B. Merrill Ricketts of Cincinnati, Ohio urges a larger use of local anæsthesia with Cocaine, especially in operations upon the head, neck and the extremities. (*Interstate Med. Journ.,* Vol. IX, p. 188).

Dr. Chaput of Paris, France has written a review of the different methods of surgical anæsthesia. In 129 cases general anæsthesia was accomplished, and 248 locally by Cocaine. In the cases of general anæsthesia Ether or Ethyl Chloride was used first in 103 cases and then followed by Chloroform. In the remaining, Ether was used alone. He appears to prefer either the local use of Cocaine or Ethyl Chloride for short operations. Intraspinal injections are preferred in operations on the legs, anus, rectum and genito-urinary organs. He would confine general anæsthesia to children, nervous people and complicated supra-pelvic operations. (*La Presse Medicale,* Vol. for 1902, first half p. 555).

Dr. Frederic Griffith of New York City offers "An Instrument to Increase the Scope of Cocaine Surgery", and in his report to the

Surgical Section of the New York Academy of Medicine on February 10th last showed some cuts illustrating the instrument. (N. Y. *Med. Record,* Vol. 62, p. 357).

Prof. A. Pitres and Dr. Jean Abadie of Bordeaux, France have published a valuable paper based on a series of experiments and observations made by them in 50 cases to determine the physiological and clinical effects of Cocainization of the spinal cord by the method of lumbar puncture. (Abstract in London *Lancet,* Vol. II for 1901, p. 1280).

Drs. Ch. Achard and Ch. Laubry of Paris, France now report on the result of their experiments in 22 additional cases of injecting Cocaine intravertebrally. (*Bull. et Mem. de la Soc. Med. des Hôp. de Paris,* Vol. 18, p. 962).

Dr. Arnold W. W. Lea, an English observer, reports on "Spinal Anæsthesia by Cocaine in Gynecology, with Observations on Eighteen Cases." Dr. Lea admits that the principal danger is still the toxic effect of Cocaine, especially as the solutions cannot be completely sterilized for the reason that boiling destroys their analgesic effect. He confirms the observations of an increasing number where Eucaine and Beta-Eucaine have been used with little or no success but where Tropacocaine has been recently used with some good results. (*The Medical Chronicle,* Vol. II, fourth series, p. 161).

Dr. Kallionzis of the University of Athens, Greece reports that he has used spinal anæsthesia in over 100 cases by the method of Tuffier, and although he believes the operation is still in a transition stage, yet it will be found not only valuable but actually called for in a certain number of cases. He calls attention to the fact that the technique should be strictly observed. (*Revue de Chirurg.,* Vol. 21, p. 440).

At a meeting of the French Surgical Congress held in Paris on October 21st to 26th last, Dr. Villar of Bordeaux reported on 39 cases of spinal anæsthesia with Cocaine without any bad results. He admits that lumbar cocainization is not necessarily the method of his choice but that it has very definite advantages in certain cases. (*Revue de Chirurg.,* Vol. 21, p. 535).

Dr. A. W. Morton of San Francisco, Cal. advocates "The Subarachnoid Injection of Cocaine for Operations on all Parts of the Body" regardless of age, sex or disease, and one which has no contraindication. He closes as follows: "During the 253 cases

herewith presented, the patients have conversed freely with operator and assistants, and on leaving the operating table have expressed feelings of satisfaction and relief, mental anxiety eliminated and start on the road to recovery under the most favorable auspices.

Since reporting the above cases I have used the method 61 times, 15 of which have been on upper extremities or head, analgesia complete." (*Amer. Medicine,* Vol. II, p. 176).

Dr. Burdett Atkinson Terrett of Natchitoches, La. writes enthusiastically on "Intraspinal Cocainization. A Critical Review of Some of the Most Salient Points in This Method of Analgesia, as it Applies to General Surgical Procedure." (*Amer. Medicine,* Vol. II, p. 417).

Dr. William P. Thornton of Buffalo, N. Y. reports on two interesting cases of intraspinal cocainization in puerperal eclampsia. He remarks that he has been unable to find a report of spinal cocainization in eclampsia or convulsions of any kind, and as far as he knows these are the first cases in which it has been tried. (*The New York State Journ. of Medicine,* Vol. I, p. 207).

Dr. S. Ormond Goldan of New York City is still interested and pushing his observations in intraspinal cocainization. He is attempting to collect a satisfactory series of data from other observers, and in order to obtain a complete record of observations he proposes the use of a blank form which he now publishes. He concludes his remarks with a bibliography which will be of value to those who are following up this subject. (*The New York State Journ. of Medicine,* Vol. I, p. 248).

Dr. Robert Ritchie of Melbourne, Australia reports a case of "Amputation through the Middle of the Thigh, under the anæsthesia resulting from the injection of Cocaine into the lumbar subarachnoid space." The patient was conscious of what was going on and that he was being touched but said that he could feel no pain whatever. (*Intercolonial Med. Journ. of Australasia,* Vol. VII, p. 13).

Dr. E. Cathelin of Paris, France recommends the "Possible Utilization of the Sacral Portion of the Canal for Sub-Arachnoid Puncture in Children." He claims the technique is far simpler than any lumbar puncture. (*Bull. Medical of Paris,* Vol. 15, p. 988).

Dr. Aldo Magri an Italian observer has made somewhat of a

study of "Spinal Cocainization in Sciatica", following out the method of Prof. Cavazzani of Venice, Italy who has reported such favorable results. (*Gaz. degli Osped. e delle Cliniche,* Vol. XXIII, p. 471).

Dr. L. Demelin of Paris, France publishes a review of the literature on the use of Cocaine as an anæsthetic in obstetrics. He describes his method of applying it to the cervix with a tampon, and by injection into the labia majora as well as by subarachnoid injection. (*L'Obstétrique,* Vol. 6, p. 122).

Dr. L.-J. Audebert of Toulouse, France does not agree with those who believe this form of obtaining analgesia is such a success. (*Gaz. hebdom. de Méd. et de Chirurg.,* Vol. VI, p. 1131). There are also not a few other observers who agree with him.

Dr. A. Guinard of Paris, France reported at the 14th Congress of the French Surgical Association held in Paris in October last, that he attributed the headache, high fever and other disagreeable symptoms to the water used in making the Cocaine solution. He avoids these disagreeable effects by employing the patient's own cerebro-spinal fluid as the vehicle for the solution. He describes his procedure in detail and is able to report 50 successful operations by this method without a single disagreeable after-effect. (*La Presse Medicale,* second half Vol. 9, pp. 247 and 277).

Dr. Chaput of Paris, France publishes a review of the cases of general anæsthesia obtained by rachi-cocainization, and concludes that an injection of 40 milligrammes ($\frac{5}{8}$ of a grain) is quite large enough for the ordinary dose. (*La Presse Medicale,* second half Vol. 9, p. 265).

Drs. P. Desfosses and J. Dumont of Paris, France describe "The Technique of Rachicocainization" at some length, giving interesting diagrams. (*La Presse Medicale,* second half Vol. 9, p. 268).

Unfortunately deaths still occur after this intra-spinal form of anæsthesia.

Dr. F. Legueu of Paris, France now reports "Two Cases of Immediate Death from Rachicocainization", both occurring on the operating table in a few minutes after the injection of 20 milligrammes (5-16 of a grain) of a Cocaine solution 1 to 100. (*La Presse Medicale,* second half Vol. 9, p. 266).

Dr. Friedrich Neugebauer of Mahrisch-Ostrau, Moravia claims to have discovered a certain succession in the areas of insensibility after intra-spinal injections, and he describes the anatomical

sequence and sensations. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 741).

Drs. Ch. Achard and Ch. Laubry of Paris, France report three cases of "Herpes of the face following Intra-vertebral Injections of Cocaine." The eruption appeared in 48 hours after the injection. (*Gaz. hebdom. de Méd. et de Chirurg.,* Vol. VI, p. 1129).

Dr. Karl Schwarz of Agram, Austria-Hungary has apparently continued his investigations with Tropacocaine in spinal anæsthesia. His report was alluded to here last year on 16 cases. He now reports on a total of over 100 cases and expresses his preference for Tropacocaine over Cocaine and Eucaine-B. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 129).

Dr. W. Kopfstein of Jungbunzlau near Prague, Austria reports on his use of Tropacocaine in spinal anæsthesia in 40 cases. During the same period he used Eucaine-A in 4 cases, but his experience was not very favorable. He naturally prefers Tropacocaine. (*Wien. klin. Wochensch.,* Vol. XV, p. 923).

Dr. George Crile of Cleveland, Ohio has carried on "An Experimental and Clinical Research into Cocaine and Eucaine." This consisted of 89 experiments on animals, mostly dogs. He gives some interesting tracings of the respiration and blood pressure and other clear illustrations. (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 491.)

Dr. John C. DaCosta and Fred. J. Kalteyer of Philadelphia, Penn. have investigated the blood changes occurring after the administration of Ether as an anæsthetic, and give six carefully prepared tables showing their results. (*Annals of Surgery,* Vol. XXXIV, p. 329).

Dr. A. H. Levings of Milwaukee, Wis. reports three cases of peripheral anæsthesia paralysis. He concludes as follows:

"The lesson to be learned from the cases reported and the experiments made would seem to be that during operative procedure the arms should never be forcibly abducted or extended and maintained in those positions for any considerable time. Forcible extension or abduction of the arms, for the purpose of practising artificial respiration or while clearing out the axilla in carcinoma, or for other operative measures about the shoulders for short periods of time, is not followed by paralysis." (*Amer. Medicine,* Vol. III, p. 233).

Dr. F. Legueu of Paris, France after quite an extended experience with subarachnoid anæsthesia felt called upon to report to the Paris Surgical Society on November 6th last that he had recently lost two cases on the operating table when under spinal anæsthesia. (*Semaine Médicale,* Vol. 21, p. 371).

Dr. Emery Marvel of Atlantic City, N. J. advocates the use of Ethyl Bromide as a primary anæsthetic to Ether or chloroform, and states that the advantages are most pronounced. With Chloroform the benefits are slight. He states he has "been unable to observe any disadvantage in the use of this method, unless it be the odor of garlic on the patient's breath, that persists for some hours afterward, but of which I have never heard a patient complain." He gives an interesting table showing the time required for complete anæsthesia with the various anæsthetics. His experience is based on 36 cases. (*Amer. Medicine,* Vol. II, p. 657).

Dr. S. Ormond Goldan of New York City read a paper before the New York State Medical Association in October last on "Ethyl Bromide and Chloride, Respectively, as Surgical Anæsthetics, with a Description of an Apparatus for Their Scientific Administration." He concludes as follows: "The rapid introduction of ether anæsthesia upon that of either ethyl bromide or chloride makes the use of these agents for that purpose particularly satisfactory, decidedly more convenient and economical, and probably as safe. I say probably, as my experience with these agents is by no means as large as that with nitrous oxide and ether; those with large clinical advantages could quickly decide this question of safety." (*N. Y. Med. Journ.,* Vol. LXXIV, p. 1088).

Dr. Haffter a French observer has employed Ethyl Bromide as an anæsthetic for minor surgical operations in over 200 patients. He enumerates his conclusions and states that there are no contra-indications when used in small doses and for short operations. (*Bull. Gén. de Thérap.,* Vol. CXLII, p. 792).

Dr. Malherbe reported on the use of pure Ethyl Chloride as a general anæsthetic at the recent Congress of Surgery, describing a special apparatus for its administration which "hermetically seals the mouth and nose." It was employed in 170 cases without a single disagreeable result. Reports from others will be awaited with interest. (*Med. Press,* second Volume for 1901, p. 636).

Drs. G. Lepage and LeLorier of Paris, France have written an article "On General Anæsthesia in Obstetrics by Pure Ethyl

Chloride." They claim that it is easily administered, the amount required is uniform, the anæsthesia can be obtained in from 30 to 60 seconds and lasts long enough not to be renewed for quite four minutes. Vomiting and headache, in their experience, do not follow from its use. They report 14 of their cases. (*Gaz. hebdom. de Méd. et de Chirurg.,* Vol. 49, p. 409).

Dr. Chaput of Paris, France advocates the use of Ethyl Chloride by inhalation when making use of local cocainization for small operations.

The use of Nitrous Oxide to produce anæsthesia is largely on the increase.

Dr. H. W. Carter of New York City reports his "Practical Results with One Thousand Cases of Nitrous Oxide and Ether Narcosis." He concludes as follows: "The advantages of nitrous oxide and ether over other anæsthetics are many, and it is gratifying to know that the method is rapidly growing in favor. Its only disadvantage is that it requires somewhat complicated and expensive apparatus and considerable skill to use it successfully.

Its general adoption would necessarily lead to the systematic instruction of anæsthetics, and would make of every hospital interne an expert anæsthetist." (N. Y. *Med. Record,* Vol. 60, p. 732).

It may be of interest to mention in this connection that Dr. Ralph J. Hess of New York City has been studying the question of the prevention of the nausea and vomiting following Ether anæsthesia. He unfortunately died before he had completed a preliminary note for publication. His manuscript however has now been put on record, but some other observer must carry on the investigation to collect a more extended line of cases to prove the points he brings up. Dr. Hess got as far as being able to report seven cases in the gynecological service of Dr. William M. Polk of Bellevue Hospital. His manuscript states that "these cases received no further treatment than ℥ v j – ℥ x water just before beginning the anæsthetic, and plenty of water after,....." (N. Y. *Med. Record,* Vol. 61, p. 295).

The *British Medical Journal* (Vol. II for 1902, p. 270) reports an interesting abstract of an article written by Dr. L. Steiner of Surabaya, Java. He "directs attention to a practice which seems to be prevalent amongst the natives of that and neighbouring islands, of producing temporary unconsciousness by compression of the neck. The details of this practice which is applied for the most

part by experts in massage as a therapeutical measure to those complaining of debility, headache, and insomnia, are thus described by the author, whose first experience of this subject was the result of curiosity with regard to the statement of a prisoner under his medical charge, that he was able to make a man senseless by grasping his neck. The subject and the operator, it is stated, are seated on the ground. The latter, who takes his position behind, grips the neck of the former with index and middle fingers applied behind the angle of the lower jaw on both sides, and by a sudden movement, compresses the soft parts over the spine. The patient, who at first is agitated, soon takes deep breaths, lets his head fall backwards, and at last apparently falls asleep. The hands of the operator are then removed, and his subject, after having remained quite motionless for some seconds, opens his eyes in bewilderment like one aroused from a dream. Dr. Steiner, whose interest in this subject led him to make a thorough and scientific investigation, gives the result of somewhat similar manipulations made by himself on 30 Javanese, care having been taken to select only healthy subjects with sound blood vessels. During each test careful and constant attention was directed to the pulse, respiration and the pupil. As it was important to observe any changes in the face and eyes, Dr. Steiner modified the method as practised by the natives, by sitting in front of, and face to face with, his subject, placing his index and middle fingers on the back of the neck, and using his thumbs for compressing the soft parts near the angles of the lower jaw. In all but 4 of his 30 subjects the author succeeded in repeating the result observed in the original observation. The sequence and character of the phenomena seem to have been invariably the same: first, agitation, next deep and rapid breathing, followed in about half a minute by backward falling of the head, and finally sleep. In his investigations the author failed to find any marked changes in the pulse and in the size of the pupil. Whether the skin was cyanosed or blanched could not be readily made out on the brown Javanese. The author, who extended his investigation by personal experience of this method, was told on coming round that his face during the manipulation became very blue. The most marked, and, indeed, the only evident, disorder beyond the main phenomena of deep breathing and unconsciousness was clonic muscular quiverings in some few cases widely distributed, but usually localized in the upper or the lower extremities.

or in the neck. The author is inclined to think that this phenomenon was due to imperfect manipulation, as he observed the quivering less frequently and in lesser degrees of intensity as he gained more experience in applying his thumbs over the carotids. It is noted as a point of some practical importance that during the stage of deep sleep the subject cannot be aroused and is completely anaesthetized. In one of the experiments a suppurating inguinal gland was removed during this stage without any reaction or feeling on the part of the patient. In discussing the nature and causation of these sequences of compression of the large vessels in the neck, which, it is pointed out, have been long known to physiologists, Dr. Steiner finds himself unable to throw much, if any, light on what he regards as an obscure subject. The theories of suggestion and hypnotism are mentioned only to be rejected. That the condition almost constantly observed after manipulations such as described in this paper is due either to pure cerebral anaemia on the one hand or to pure cerebral hyperaemia on the other is held to be inadmissible, as it is quite impossible, he states, to compress through intact skin a carotid artery without compressing at the same time its accompanying vein. That simultaneous compression of the vagus and sympathetic cannot be considered as important factors is indicated by the facts that in most cases of the Javanese method of producing narcosis no changes are observed in either pulse or pupil. In conclusion, Dr. Steiner suggests that this method, which, as is shown by the extensive experience of the Javanese, is free, if properly applied, from danger, may claim further investigation with a view to its application for purposes of anaesthesia in surgical operations."

Dr. E. Schlechtendahl of Barmen, Rhenish Prussia advocates "Chloroform Narcosis Without a Mask by Means of a Tracheal Cannula", and offers a special instrument to accomplish this. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 229).

Dr. A. M. Kulagin, a Russian Surgeon, believes in "Drop" Narcosis and suggests a flask in the form of a globular separating funnel with a glass stopper perforated at the side to admit the air when in use. The drops are regulated by means of the glass stopcock. (*Phila. Med. Journ.,* Vol. 9, p. 18).

Dr. Prescott Le Breton of Buffalo, N. Y. having had some extended experience with Dr. Goldan's apparatus, now offers "A Second Contribution to the Study of Anæsthesia by Nitrous Oxide Gas

and Ether", relating eight cases and giving an illustration of the apparatus. (*Phila. Med. Journ.,* Vol. 9, p. 586).

Dr. Frederic Griffith of New York City suggests "An Instrument to Increase the Safety of Anæsthesia", and illustrates his device. (*N. Y. Med. Journ.,* Vol. LXXV, p. 832).

Dr. Harvey Hilliard of Wilton-place, London, S. W., England contributes "Further Notes on the Use of the Naso-Pharyngeal Tube for Prolonged Nitrous Oxide Anæsthesia." He gives an illustration of the apparatus and concludes as follows: "Since I first introduced this apparatus in 1898 I have been able in my own practice to make good the claim which I then made for it—viz., that it would render the employment of ether in dental surgery unnecessary; that owing to its small bulk and great portability it is more convenient and economical, as regards the quantity of N_2O used, than any other apparatus employed with the same object; and, finally, that it is free from risk of damage to the nose, naso-pharynx, and mouth, and is without danger to the patient." (London *Lancet,* Vol. I for 1902, p. 1824).

Dr. Gustav Spiess of Frankfort-on-Main, Germany has observed for a number of years what appears to be a "curative effect" after the use of anæsthetics. He claims that wounds heal with marked rapidity and with very slight reaction after using anæsthetics. He attributes the effect to a reflex action on the vasomotor nerves which produces a change in the circulatory system of the inflamed part. He would admit that his experience is not quite extensive enough as yet and therefore now only makes a preliminary report. Evidently he proposes to continue his observations. (*Centralbl. für Innere Med.,* Vol. 23, p. 222).

The use of 4 Cc. (about 1 fluidrachm) of Amyl Nitrite to 1 pound (453.6 grammes) of Chloroform has been suggested by Dr. Nicholas Senn of Chicago, Ills. to produce anæsthesia, and some good results are reported. Further observations are awaited with interest.

Dr. Albert Abrams of San Francisco, Cal. writes the following observation to the Editor of *American Medicine* (Vol. III, p. 380): "I had occasion to administer amyl nitrite by inhalation to a young man for purposes of diagnosis. Previous to his visit to my office he had twice taken chloroform for surgical operations. Soon after inhaling the amyl nitrite he said, 'That is chloroform and I want to vomit.' On assuring him that he would not vomit,

he became intensely pale and perspired profusely. He then passed into a deep slumber, from which it was impossible to arouse him, until I suggested that he was awake. This was an instance of autohypnotism, and the individual in question belonged to a small percentage of persons upon whom the physiologic effects of amyl nitrite were not manifest, for it was impossible subsequently to obtain the physiologic action of the drug."

Dr. Heinz Wohlgemuth describes very fully an apparatus which he has constructed for the administration of Chloroform with Oxygen, giving five cuts of the complete apparatus and mask in detail. He tabulates 182 cases giving important points in each. His apparatus records the exact number of drops of Chloroform used and the percentage of Oxygen. (*Archiv. für klin. Chirurg.,* Vol. 64, p. 664).

Dr. Hammer of Freiburg, Saxony offers a new hypodermic syringe for procuring anæsthesia by the Schleich Method. He gives a cut of the syringe which is at least quite ingenious. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1134).

Dr. Alexander von Zawadzki of Warsaw, Russia offers a syringe for the Schleich subcutaneous injection of anæsthetic and normal salt solutions. Judging from the three cuts given it apparently is a very inexpensive and practical form of glass syringe. (*Centralbl. für Chirurg.,* Vol. 28, p. 857).

Dr. Leonard Williams of York-street, London, W., England describes a form of mask for obtaining Ether narcosis which he states he saw in France. He explains it in full by means of a rough cut. (London *Lancet,* Vol. II for 1901, p. 1297).

Dr. F. Victor Milward of Birmingham, England believes he has a simple apparatus for the administration of mixtures of Ether and Chloroform. He gives a very clear cut of the apparatus and explains in full. (London *Lancet,* Vol. I for 1902, p. 1779).

Dr. C. W. LeFever of Philadelphia, Pa. offers "A New Inhaler Especially Intended for Operations on the Eye or Face." He gives a cut of the inhaler for which he claims at least the one advantage of much significance to some surgeons in that no Ether vapor gets out into the air of the room while it is being used. (*Amer. Medicine,* Vol. IV, p. 65).

Anæsthesin is the name given by Dr. E. Ritsert of Frankfort-on-Main, Germany to a product he has prepared for use as a local anæsthetic. Chemically it is the Ethyl-Ester of Par-Amido-

Benzoic Acid. It appears in the form of fine colorless, odorless and tasteless needle-like crystals, only slightly soluble in cold water but more readily in hot water, alcohol, ether, chloroform, acetone, benzene and fixed oils. It is basic in its action forming salts. The hydrochlorate is the one which apparently has been most employed. The aim was to obtain a substitute for cocaine which would be of a less toxic character.

Prof. Carl von Noorden of Frankfort-on-Main, Germany is one of the most prominent experimenters with this new local anæsthetic. He was enabled to give very large doses to rabbits without toxic action being apparent. He has also used it clinically in doses ranging from 300 to 500 milligrammes (4.8 to 7.7 grains) two or three times a day in cases of hyperæsthesia of the stomach. Also in cases of gastric ulcer with very good results. He reports that the anæsthesia lasts much longer, and little is feared from toxic effects. Good results followed its use in affections of the larynx and pharynx, in cases of hemorrhoids, in pruritus and especially in pruritus accompanying diabetes. He has also used it in the form of a fine powder on ulcers of the leg and in other regions which did not respond to the usual treatment. (*Berlin. klin. Wochensch.,* Vol. XXXIX, p. 373).

Dr. Dunbar of Deutsch-Eylau, Eastern Prussia calls attention to the superiority of Anæsthesin over cocaine. He has used it in the form of a subcutaneous injection in his surgical practice. The solution he uses is as follows:

Anæsthesin Hydrochlorate.	0.250	parts
Sodium Chloride.	0.150	"
Morphine Hydrochlorate	0.005 to 0.015	"
Distilled Water.	100.000	"

This solution is capable of being sterilized. He reports that the anæsthesia is complete for more than 30 minutes. He suggests its trial in ophthalmological practice. (*Deut. Med. Wochensch.,* Vol. XXVIII, p. 402).

Dr. Lengemann of Breslau, Prussia has also investigated this agent. His principal use has been externally, for granulating surfaces before cauterizing is attempted. His plan is to spread the dry powder over the surface, producing local anæsthesia rapidly. He reports exceptionally good results in carcinomatous ulcers. (*Centralbl. für Chirurg.,* Vol. 29, p. 585).

Dr. Carl Kassel of Posen, Prussia is very enthusiastic over his

experience with it in his throat and nose practice. He had for five years previous used orthoform to great advantage, but this new agent is used with much more confidence on account of its non-toxic properties. He describes how he introduces it by inhalation with menthol. The anæsthesia lasts from two to twelve hours. (*Therap. Monats.,* Vol. XVI, p. 386).

Antipyrin (Phenazone) is still fully recognized by the medical profession, and wherever mentioned is most frequently alluded to as a matter of course in certain lines of treatment. Therefore it will be of interest here to only mention some special uses.

Drs. E. Weill and M. Péhu of Lyons, France have made a careful study of the use of Antipyrin in 104 cases of pertussis and find, out of the list of various agents used as a preventive during the contagious period, that Antipyrin should be placed at the top. (*La Sem. Méd.,* Vol. 21, p. 385).

Drs. H. Curschmann and P. Zweifel of Leipzig, Germany have made use of this agent in puerperal septicemia. They have found from their observations in 78 cases that although it does not act as favorably as hoped for in the general field of usefulness as a febrifuge, it does work well in the puerperal state. The individual dose is 500 milligrammes (7.7 grains) repeated throughout the day so that the total amount given daily is from 2 to 4 grammes (30.9 to 61.7 grains). They have observed the peculiar rash often seen, but do not agree that it should thereby indicate suspension of the drug. (*La Sem. Méd.,* Vol. 22, p. 208).

An English Surgeon, Major E. Carrick Freeman stationed at Bermuda reports "Three Cases of Cerebro-Spinal Fever Treated with Antipyrin." (*Brit. Med. Journ.,* Vol. I for 1902, p. 1262).

Dr. A. Martinet, speaking of Quinine, Antipyrin, Exalgin, Phenacetin and other agents, mentions the fact that Antipyrin given with Quinine increases its solubility. (*La Presse Médicale,* Volume for 1902, p. 390).

Drs. Simon and Maheu of Paris, France reported to the Paris Pediatric Society a case of "Toxic Hemoglobinuria following the Administration of Antipyrin." The case was a young girl suffering from chorea of a severe type, to whom had been given 9 grammes (138.9 grains) of Antipyrin in four hours. In the discussion which followed the report, a case was recalled by one of the members in which a similar condition was produced after administering to a child six years old from 2 to 3 grammes (30.9 to 46.3 grains)

of Potassium Chlorate. (*Annal. de Med. et Chirurg. Infant.*, Vol. V, p. 823).

Two combinations of Antipyrin with Camphoric Acid forming an acid camphorate and a neutral camphorate have been prepared. No clinical data are yet to be found on these newer combinations.

Antitoxins and the discussion of the same continue of paramount importance and interest, and particularly the Antitoxin of diphtheria which may be considered to-day "to approach as near to a specific in therapeutics as may be safely relied upon." The above quotation expresses the opinion of a large proportion of observers, and whereas others may not be quite ready to speak as emphatically, practically all acknowledge it of inestimable value. Wherever a careful comparative study of the diphtheria Antitoxin is undertaken in an institution furnishing a sufficiently large number of cases to eliminate individuality and the relative mildness or severity of the particular epidemic, the statistical evidence is overwhelmingly convincing. It now goes without question that the best results are to be expected when the injections are increased in strength in proportion to the severity of the case.

Dr. von Behring's present theory concerning diphtheria is that there exists what he calls a false diphtheria bacillus in contradistinction to the true bacillus. He has observed first that diphtheria bacilli are ubiquitous and that there must be some explanation as to their evident virulency in some cases and lack of it in others. From his investigations he would claim that the false diphtheria bacilli occurring in certain individuals is antitoxic against infection by the true bacilli. This view has also long been maintained by Dr. Fritz Schanz of Dresden, Germany and he now reiterates it. (*Muench. Med. Wochensch.*, Vol. XLIX, p. 64). By this line of reasoning immunity to the true bacillus is attained by a previous infection with the false bacillus. The efforts to separate the true from the false bacillus have not as yet been successful, and it is claimed that it cannot be successful for the reason that they are interchangeable and the existence of either the one or the other variety depends upon the soil upon which it grows. It has been shown that the true bacillus will produce various other conditions in human beings beside the local diphtheria manifestations.

Sir Thomas Barlow of England in his Annual Address on "The Study of the Natural History of Disease the Basis of all Advance in its Treatment" at the recent Annual Meeting of the British

Medical Association held at Manchester, expresses his belief that a revolution has taken place in the treatment of diphtheria by the preparation and use of diphtheria Antitoxin.

"The statistics are striking enough, for they show a reduction of mortality between one-third and one-half. But statistics are not the only test upon which a doctor bases his practice. The manifest alteration after the use of antitoxin, even in a most unfavourable and ultimately fatal case, is convincing enough to an informed person that we have here a fundamental remedy of enormous potency.

When, within forty-eight hours, we see a young subject with malignant diphtheria accompanied by secondary infections which are on the verge of setting up septicaemia, so far relieved after the use of the remedy that the glands are reduced in size, the cellular tumefaction of the neck is lessened, the membranous exudation is arrested and begins to separate at the edges, the tongue is more moist, and the general state ameliorated, we know that something has been done to control the disease processes with which no previous treatment with which we were acquainted was in the least degree comparable.

Furthermore, in cases in which tracheotomy has to be performed, not only are the mortality statistics improved, but we see for ourselves that the membrane formation ceases to spread, and the tube, which has formidable disadvantages of its own, can be withdrawn much sooner, and the risks of ulceration and stenosis can be thereby lessened.

Moreover, those of us who were doubtful about the expediency of intubation in this disease, on account of the difficulty of providing for the evacuation of the membrane below the tube, are now only too glad to admit of its applicability, because of the gradual melting away of the membrane.

Since the introduction of the antitoxin, the urgency of local applications to the fauces has become lessened to a marked extent. We are told that antitoxin only neutralizes the toxin, but does not destroy the bacilli themselves. A weak mercurial solution which attacks the bacilli, though it coagulates the albumen, and an alkaline solution which favours the solution of the membrane, seem to be all that are needed. By too much zeal in local applications, we interfere with the protective action of the phagocytes, and the old corrosive applications are entirely ruled out.

With continued experience the limitations of antitoxin are becoming more and more clearly understood. A careful man seeks the assistance of the bacteriologist in every doubtful case, but does not wait for his report, for he knows that the certainty of success depends on the remedy being introduced early, say within the first three days, and that the risks of its employment are insignificant. The existence of secondary infections makes him far more anxious, and he feels compelled to warn the friends on that account, but it does not prevent his applying the diphtheria antitoxin even in very grave cases." (*Brit. Med. Journ.,* Vol. II for 1902, p. 313).

Dr. Walter R. Griess of Cincinnati, Ohio in writing on "The Value of Antitoxin in Diphtheria" states: "That antitoxin does not always act the same in different cases of diphtheria can not have escaped the observation of anyone who has treated a great number of cases of this disease. We can not expect the same immediate or ultimate results in every instance when antitoxin is given, for there are the following varying conditions to deal with: The age of the patient; the duration of the disease prior to giving antitoxin; the general condition prior to infection; and the type of the disease (parts affected), and virulence of the infection."..... .....

"In closing, let me reiterate that the results to be expected from antitoxin depend especially upon two things: (1) When used in the course of the disease (late or early); and (2) in what type or class of cases it is employed." (*Amer. Medicine,* Vol. II, p. 333).

Dr. John Brownlee of Glasgow, Scotland reports on "The Antitoxin Treatment of Diphtheria in the City of Glasgow Fever Hospital, Belvidere, During Six and a Half Years." He gives 12 tables showing the results. (*Glasgow Med. Journ.,* Vol. LVII, p. 241).

Dr. L. Emmett Holt of New York City read a paper a year ago but which is just now appearing in print relating a case of "Diphtheria of the Conjunctiva Treated by Antitoxin." The case was a child six months old, and 2400 units of Antitoxin were administered. The case progressed rapidly and without untoward effects. (*Archives of Pediatrics,* Vol. XIX, p. 349).

Dr. Mitscha of Melk, Lower Austria reports on "The Successful Results of Antitoxin in Diphtheria in Melk During the Past 5 Years." He gives a table of the cases showing the five years from 1897 to 1901 inclusive. This report is especially interesting because it gives the results of a private country practice in distinction from

the usual hospital reports. (*Wien. klin. Wochensch.,* Vol. XV, p. 557).

Dr. F. Siegert of Strassburg, Germany has published his results in the treatment of diphtheria with Antitoxin in the Children's Hospital in Vienna, Austria from 1886 to 1900 which will be of interest to those who are studying the statistics. (*Jahrbuch für Kinderheilkunde,* Vol. 55, p. 80).

Dr. D. Montgomery Paton of Melbourne, Victoria advocates the use of Antidiphtheritic Serum in the treatment of general sepsis. He claims to have had an experience of $3\frac{1}{2}$ years' practical working in this line and relates typical cases. He offers his present remarks as preliminary, for he states that he has accumulated plenty of clinical illustrations which "are now being collected, and will be published as early as the exigencies of a busy practice will allow." (*Ther. Gaz.,* Vol. XXVI, p. 89).

Drs. Netter, Bourges and Bergeron, three French observers, have written a memoir on the prophylaxis of diphtheria by the preventive injections of serum. They have failed to notice any dangerous or unpleasant complications following this practice, and they look ahead to a time in the very near future when systematic preventive inoculations will be as regular as vaccination. In Dr. Netter's practice in the Trousseau Hospital of Paris 502 children have been inoculated with Antidiphtheritic Serum. This represented 200 families and from each family at least one case of diphtheria had been sent to the Hospital. The average inoculation was 10 Cc. which gave every evidence of being sufficient. Only 13 out of this number of children were attacked by diphtheria—7 developed within 24 hours and 6 after one month. Not a single case occurred between the second and the twenty-eighth day. The comparison with the above figures was made with 491 cases which were not immunized. These came from families also in which at least one member was sent to the Hospital with diphtheria. Out of the above number 86 cases of diphtheria occurred, of which 18 were fatal and 39 severe. (*Bull. de l'Acad. de Med.,* Vol. XLVII, p. 366).

Dr. Arthur Somers of Selby, England reports a "Severe Case of Diphtheria Treated by Antitoxin on the Seventh Day." He concludes as follows:

"The mother informed me that two hours after the first and the same time after the second injection of serum she thought the child was dying, as she became cold, and appeared to faint, but

after half an hour or so she improved again. This statement is of interest, owing to the attack of syncope occurring twice, and at the same period after each administration of serum. It may, of course, have been only a coincidence, or the serum may have been the cause. I have not seen any mention of a similar effect in cases recorded." (*Brit. Med. Journ.,* Vol. I for 1902, p. 452).

Dr. Arthur H. M. Saward of Upper Norwood, London, S. E., England reports two cases of his own which presented somewhat similar symptoms to those of Dr. Somers. (*Brit. Med. Journ.,* Vol. I for 1902, p. 1025).

Dr. E. W. Goodall of Homerton, England and Dr. Charles Porter of Leith, Scotland both rather question whether some other disturbing element than the Antitoxin might not have been the cause of the symptoms in Dr. Saward's cases. (*Brit. Med. Journ.,* Vol. I for 1902, p. 1178).

Dr. Henry D. Jump of Philadelphia, Penn. writes on the "Duration of Immunity of Diphtheria Antitoxin", and reports five cases. He concludes as follows: "I feel warranted from these reports in deducing the following conclusions:

1. That as diphtheria antitoxin is practically harmless, all exposed persons should receive an immunizing dose in proportion to age.

2. That two hundred and fifty units should be given to children under two years and five hundred to all others.

3. That the immunity will last for at least three weeks, provided a reliable antitoxin is used.

4. That all exposed persons should be removed from infected surroundings, either by thorough disinfection of their own quarters or by removal to other places. If this be impossible, the immunizing doses should be repeated every third week." (*Phila. Med. Journ.,* Vol. 9, p. 69).

Drs. P. Geffrier and E. Rozet of Paris, France do not believe in giving Diphtheria Serum for prophylactic purposes, and claim that even small doses may cause trouble. (*Archiv. de Méd. des Enfants,* Vol. V, p. 88).

On the other hand Dr. Fourniols of Paris, France has written a thesis claiming that large doses are devoid of danger. (*Gaz. hebdom. de Méd. et de Chirurg.,* Vol. 49, p. 271).

Dr. E. Thomas of Geneva, Switzerland also believes in large doses. He read a "Note on the Use of Large Doses of Antidiphtheritic Se-

rum." He begins on the very first day of treatment with 40 Cc. if the case is a severe one or if croup is present. On the second day his treatment is expectant, as he watches for the results of the initial doses. (*Revue Méd. de la Suisse Romande,* Vol. 21, p. 551).

Dr. Adolph Rupp of New York City has published some "Remarks on the Scientist, the Practitioner, and the Antitoxin Treatment of Diphtheria." He evidently is one of the few remaining skeptical observers. He writes:

"The antitoxin question, as a therapeutical and a professional question, has nothing to do with prejudices pure and simple against antitoxin or serum. They are tried, and they are judged. And trying and judging is a complex psychological problem, not of the individual only, but also of the crowd. The majorities of the day are not stable quantities. Minorities of to-day may be the majorities of to-morrow. The tide is turned by facts or supposed facts. We all want facts, and the secret of their relation and interrelationship." He closes his final sentence with the remark "that antitoxin is practically a remedy of very limited utility, and that the enthusiastic believer aims his variously loaded syringe at a vanishing possibility." (N. Y. *Med. Record,* Vol. 60, p. 336).

Not much progress has been made in the treatment of tetanus during the past year by Antitetanic Serum.

Dr. Lawrence E. Holmes of Biltmore, Asheville, N. C. writes on "Tetanus in the Light of Modern Treatment with a Report of Three Cases." He reviews briefly the subject of tetanus, particularly with relation to its treatment, and before relating his cases says:

"We have now briefly reviewed the various methods employed in the treatment of tetanus, and have seen how little reliance can be placed on any of them. In the face of all these methods, and knowing that in most cases the chances are against us whatever we do, what shall be our line of treatment when we meet a case of tetanus? In the absence of any reliable remedy, and realizing the great fatality of the disease, it is only right that we should give the patient the benefit of every doubt and possibility. If there is a wound it must, of course, be thoroughly cleansed, and in rare cases and under certain conditions, amputation of a limb is advisable. The patient must be put in a darkened room and kept as quiet as possible. Antitoxin should be at once administered freely, and continued daily in large amounts, as frequently as the condition indi-

cates. The hypodermic is the simplest method of administration, and probably as efficacious as any, though the intraspinal may be tried, if convenient. At the same time I would strongly recommend the hypodermic use of carbolic acid, as I know of no reason why the two methods of treatment should not be tried at the same time." (*Amer. Medicine,* Vol. IV, p. 332).

Drs. Enriquez and Bauer of Paris, France report a case of acute tetanus where convulsions persisted after treating with Chloral and Antitetanic Serum, but responded to subcutaneous injections of 200 grammes of simple Serum containing 3 Cc. of a 2 per cent. solution of Carbolic Acid. (*Gaz. hebdom. de Méd. et de Chirurg.,* Vol. VI, p. 1231).

Dr. A. Leteve of Pittsburg, Penn. offers "A Contribution to the Study of Infectious Diseases with Especial Reference to Tetanus." The views he expresses he says "are not stated as facts, pure and simple, but are the result of observation based upon a few experimental cases, and that they must be repeated many times by other observers before they can be accepted by any, myself included." He uses a combination of Antistreptococcic and Antidiplococcic Antitoxin. (*Penn. Med. Journ.,* Vol. V, p. 236).

Dr. Fielding Lewis Taylor of New York City publishes "Some Remarks on Tetanus" giving a brief summary of the history of five cases. (*N. Y. Med. Journ.,* Vol. LXXIV, p. 105).

Dr. Adolph Dehler of Würzburg, Bavaria reports the case of a middle-aged woman who stuck a pitchfork into the dorsum of her left foot producing tetanic symptoms twelve days later. Large doses of Antitoxin were injected at the beginning, together with Chloral. Complete recovery resulted on the nineteenth day after the treatment was begun. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1417).

Dr. E. Mansel Sympson of Lincoln, England offers a "Note on a Case of Tetanus Successfully Treated by Anti-tetanic Serum." It was the case of a 45 year old man who had been kicked in the back by a bull 14 days before admission to the County Hospital. He fell forward and "knocked his nose on a piece of rusty iron which gave it a nasty ragged cut." (London *Lancet,* Vol. II for 1901, p. 729).

Dr. V. Krasmitski of Kiew, Russia has carried on a series of experiments for immunization in rabies by intravenous injections. (*Ann. de l'Institut Pasteur,* Vol. XVI, p. 393).

Dr. Letoux of Vannes, France related before the French Surgical Association an account of four cases of tetanus successfully treated by intracerebral injections of Antitetanus Serum. (*Presse Medicale,* second half 1901, p. 247).

Dr. E. von Leyden of Berlin, Germany exhibited before his local Medical Society in Berlin a patient who had previously been affected with tetanus but who had been successfully treated by Antitetanic Serum. The case was unusual from the fact that the injection was given in the subarachnoid space of the spine. The case was that of a coachman 22 years old. After 10 Cc. of the spinal fluid had been withdrawn 5 Cc. of Antitoxin were injected. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 477).

Dr. Th. Pfeiffer of Gratz, Austria has treated 14 cases with 50% of recoveries. He states that statistics do not show a marked decrease in the death rate by Antitetanic Serum treatment, but mentions that the spinal subarachnoid method seems to give better results and rather infers that it should be employed oftener. He relates in all 22 cases. (*Zeitschrift für Heilkunde,* February 1902, p. 91).

Dr. Ch. Amat of Paris, France in writing on "Intracerebral Injections of Anti-tetanic Serum in the Treatment of Tetanus", reviews five cases showing a successful result. (*Bull. Gén. de Thérap.,* Vol. CXLII, p. 38).

Dr. N. D'Ancona of Padua, Italy reports two severe cases of tetanus "cured by the injection of Antitetanic Serum into the cerebro-spinal cavity". (*Gaz. degli Osped. e delle Cliniche,* Vol. XXII, p. 1480).

The use of Antitetanic Serum in veterinary practice has been brought out prominently in Europe, and particularly by the English Veterinary Surgeon Sydney Villar. In this country the Veterinary Surgeon William A. Young of Utica, N. Y. relates two cases of recovery after Antitetanic Serum injection in horses eight and nine years old. (*Amer. Vet. Rev.,* Vol. XXV, p. 920).

Also Veterinary Surgeon E. McGraw of Chicago, Ills. relates one case in a horse nine years old, with very gratifying results. (*Amer. Vet. Rev.,* Vol. XXVI, p. 340).

Dr. Herhold, an observer in the Field Hospitals during the Chinese Campaign, saw four cases of tetanus, three of which died and the fourth one had a slight attack. He reports that Behring's Antitetanic Serum was used in two of the fatal cases with some bene-

ficial result although of course only temporary. Dr. Herhold, realizing the filthy conditions under which the Chinese ordinarily exist, feared the danger of tetanus infection, so he gave on general principles a subcutaneous prophylactic dose of 20 Cc. to almost every soldier who had an open wound. (*Deut. Med. Wochensch.*, Vol. XXVII, p. 479).

Dr. Louis C. Ager of Bay Ridge, N. Y. related "A Fatal Case of Tetanus, Treated with Antitoxin", at a meeting of the Kings County Medical Association. His case was that of a healthy boy 13 years old "who had been thrown from a wagon on the previous day receiving a severe laceration of the left thigh by striking on an old piece of sewer pipe." (*Amer. Medicine,* Vol. II, p. 575).

Dr. T. Graham Scott of Denmark Hill, London, S. E., England reports a "Case of Tetanus: Use of Antitetanic Serum: Death." The case was that of a woman 21 years old who had a nail penetrate the right foot just below the ball of the little toe six days previous to when she was first seen. The nail passed through the sole of the boot and the stocking. (*Brit. Med. Journ.,* Vol. II for 1901, p. 1529).

Dr. B. Möllers of Berlin, Germany offers a "Contribution to the Question of the Value of Tetanus Antitoxin." He reports four severe cases of tetanus in which the Antitoxin was administered in large doses within thirty hours after the first symptoms were recognized. In not one of his cases did he observe any beneficial results—all died. He would claim that other than severe cases are of little importance as establishing the value of Antitoxin, for he would observe that the mild cases have a very distinct tendency to get well of their own accord. He believes in the use of Antitoxin as a prophylactic measure. (*Deut. Med. Wochensch.*, Vol. XXVII, p. 814).

Mr. Nesbitt O'D. Burns, Surgeon in the Ottery Saint Mary (England) Hospital relates a case of "Tetanus Treated with Antitetanus Serum and Morphine: Death." The patient was a boy 16 years old in whom tetanus followed a pistol-shot wound. (*Brit. Med. Journ.,* Vol. I for 1902, p. 654).

The study of snake-bite and the inoculation of Antivenene has gone on with much encouragement during the past year.

Dr. A. Calmette of Lille, France himself was bitten last summer by one of his own snakes. He promptly gave himself an injection of his Serum which proved effective, but not until after his hand

had swollen up and an acute fever had set in. The report comes that he was perfectly well on the following day, thus demonstrating personally not only his confidence in the Serum but its efficiency by a perfectly convincing proof.

The following is an extract from the report made by the Medical Officer of the Bengal-Nagpur Railway in India for the month of August last: "On the night of the 23rd I was called to see a cooly woman who had been bitten by a large snake supposed to be a cobra. She was said to have been bitten at about 7 P. M. and I did not see her till two hours later. She was then practically moribund, the throat paralyzed, and consciousness completely lost. All the symptoms of poisoning by colubrine venom were well marked. I injected a full dose of Dr. Calmette's antivenene, but was not sanguine as to the result, the patient's condition being apparently hopeless. The effect of the remedy was marvellous; consciousness returned in 15 minutes, and I was so encouraged by the result of the first injection that I decided to give another dose of the serum. It acted like magic and within three hours of the first injection the patient was well. Dr. Sen, my assistant surgeon, was present at the time. I have sent the notes of the case to Dr. L. Rogers, the professor of pathology to the Calcutta Medical College, and propose to also send a report to Dr. Calmette, who is, I know, always glad to hear of cases in which his remedy has been used. I am satisfied that in even desperate cases we have in Dr. Calmette's serum a really reliable remedy for the bites of poisonous snakes, and I propose to supply all assistant surgeons with a syringe and some bottles of serum. At present only this place and Chakardharpur are so supplied. I am now convinced that the case reported by me in May would in all probability have been saved had a large dose of the serum been injected and had the patient come under treatment earlier." (London *Lancet,* Vol. II for 1901, p. 1135).

Dr. Joseph McFarland of Philadelphia, Penn. has made quite a study of Antivenene in continuation of his previous observations alluded to here last year. He published "Some Investigations Upon Antivenene" the latter part of last year. (*Journ. Amer. Med. Assoc.,* Vol. XXXVII, p. 1597).

His extensive paper on "The Progress of Knowledge Concerning Venom and Antivenene. A Synoptical Review of the Literature of the Past Fifteen Years" appeared early this year and will be of

much interest to those who are investigating in this line. (*Phila. Med. Journ.,* Vol. 9, pages 329, 369, 403, 450 and 492).

Veterinary Surgeon E. M. Ranck of Philadelphia, Penn. read a paper before the American Veterinary Medical Association on "Snakes, Snake Venoms, and Antivenenes." He carried on his observations with Dr. McFarland, "using horses which were gradually immunized until the quantities of the venom they could withstand far exceeded that which would certainly have been fatal at initial injection." He then gives a short clinical record of his observations during the experiments. (*Journ. of Compar. Med. and Vet. Archives,* Vol. XXIII, p. 343.)

A report comes from the Station Hospital at Khandalla, India of a case of cobra bite in the Army which was treated by Calmette's Antivenene with recovery. (*Brit. Med. Journ.,* Vol. I for 1902, p. 202).

Dr. Frank Tidswell of Sydney, New South Wales has been continuing his experiments in the local Board of Health with the venom of different snakes. He has already had opportunity to obtain the venom of the tiger snake, the death adder, the brown snake and the black snake. As far as he has gone it would appear that each Serum is specific in its action only in cases where the bite is inflicted by the species of snake furnishing that serum. His observations would also lead him to think that Calmette's Antivenene lacks efficacy against the tiger snake and the "daboia" of India. (*Australasian Med. Gaz.,* Vol. XXI, p. 177).

The results of experiments with Antityphoid Serum have been of a rather discouraging nature during the past year. There have been reports of a certain amount of protection but even this does not last long, and the best that can be claimed is that the affection takes a milder and less fatal course in the inoculated.

Dr. Chantemesse of Paris, France together with Dr. Widal have prepared a Serum from the typhoid toxin rather than the bacilli, and they are looking forward to favorable results. The recoveries which they have noted have apparently come from cases treated early. Dr. Chantemesse has applied this Serum in 100 severe cases. His initial dose is from 10 to 12 Cc. The minimum dose is given when the patient is seen before the onset of the attack, during the first five or six days or when the patient is seen late in the disease after the deep intoxication has occurred. (*La Médecine Moderne,* Vol. 13, p. 34).

Dr. Albert Schütze of Berlin, Germany has been experimenting with the Serum obtained from the typhoid bacilli. He has made repeated inoculations in rabbits and guinea pigs. He finds that such possess no immunizing power. (*Deut. Med. Wochensch.,* Vol. XXVIII, p. 478).

Dr. E. W. Ainley Walker of Oxford, England has evidently continued his series of investigations with Antityphoid Serum, and now makes quite an extended report giving a full bibliography. (*Journ. Path. and Bacter.,* Vol. 7, p. 250).

A paper on "The Present Status of Serumtherapy in Typhoid Fever" was read by Dr. James Ewing of New York City before the New York County Medical Association on November 18th last in which he concludes as follows: "It would appear that the outlook in this field is fairly indicative of success, if not in the preparation of a curative serum for typhoid fever, then at least in essential progress in the knowledge of artificial immunization both in this disease and in other infections which have heretofore baffled all attempts at serumtherapy." He also gives quite a complete bibliography. (*Med. News,* Vol. 80, p. 577).

Dr. A. E. Wright of Netley Army Medical School (England) prints a "Note on the Results Obtained by Antityphoid Inoculation in the Case of an Epidemic of Typhoid Fever" which occurred in the Richmond Asylum in Dublin, Ireland. Out of 30 of the uninoculated cases 4 died, out of the 5 inoculated cases one died, and he states in conclusion "that the result is in conformity with that of all the statistical returns of antityphoid inoculation which have reached me." (*Brit. Med. Journ.,* Vol. II for 1901, p. 1226). Later Dr. Wright gives the "Results of Antityphoid Inoculation in the Case of the Fifth Battalion, Manchester Regiment, in South Africa" in which he shows that out of 23 uninoculated cases 7 died, out of 3 inoculated none died. He concludes here: "The three attacks in the inoculated are reported to have been of an exceptionally mild type, contrasting in a striking manner with the severe attacks which occurred in the uninoculated. At the time of sending in the report some of the uninoculated patients were 'not yet out of danger.'" (*Brit. Med. Journ.,* Vol. I for 1902, p. 866).

The following note appeared in the *British Medical Journal* (Vol. I for 1902, p. 984) under date of April 19th, 1902: "Captain Norton inquired early in the week if the Secretary of State for War could state whether the report on the results of antityphoid inocu-

lation had been received, and if so, whether it showed a diminution in mortality in the inoculated attacked by the disease as compared with the uninoculated. Lord Stanley said in reply that the report had been received. It dealt with only 4,138 cases, and the aggregate results showed a mortality of 8.2 per cent. in inoculated persons as against 15.1 per cent. in the uninoculated. The report, however, did not appear sufficiently conclusive in itself, and it seemed expedient to obtain further statistics from the admission and discharge books before publishing it."

Dr. Gottlieb Markl of Vienna, Austria reports on the use of a so-called Antityphoid Extract obtained from the internal organs of rabbits immunized with living cultures of typhoid bacilli. This is the Antityphoid *Extract* of Dr. Valentin Jez of Vienna, and was tested in comparison with Antityphoid *Serum*. His conclusions are that the Extract contains anti-bodies which appear to be less active than the corresponding immune serums. These bodies appear to be specific substances, not present in the rabbit's organs and that their action is not antitoxic but rather anti-infectious. (*Wien. klin. Wochensch.,* Vol. XV, p. 65).

In concluding the unsuccessful experiments with Yellow Fever Serum as carried on by the Special Commission working in Havana, Cuba, Dr. V. Havard, U.S.A. now reports that the Commission "having come to the conclusion that the vaccine prepared by Dr. Caldas is useless as a prophylactic against yellow fever recommended that all further experiments with it be discontinued." (N. Y. *Med. Record,* Vol. 60, p. 425).

Experiments are still being continued with an Anti-tuberculosis Serum.

Dr. Emilio Cioffi, an Italian observer, has reported on his experiments in this line with guinea pigs. Apparently none of his animals so treated died. He was enabled to try the same experiments on a few patients with marked improvement. He calls attention however to the fact that its use is rather contraindicated in secondary infections. (*Gaz. degli Osped. e delle Cliniche,* Vol. XXIII, p. 13).

Dr. Earl Sprague Bullock of Silver City, New Mexico now publishes "A Report on the Use of Antiphthisic Serum T. R." He gives the clinical history of 23 cases with conclusions in each case. He finally summarizes as follows: "In my opinion the results obtained with this treatment are nearly comparable with those ob-

tained without it, and for this reason I believe that those who have spoken favorably of this agent have unwittingly interpreted what occurs naturally as a result of proper hygienic surroundings in such a large proportion of tuberculous cases as the effect of this serum.

In using one therapeutic agent exclusively in the treatment of any self-limited disease, and pulmonary tuberculosis is often that, it is very easy to ascribe as the result of treatment what occurs naturally in a proper environment." (*Med. News,* Vol. 80, p. 532).

A little more encouragement has followed the use of Antistreptococcus Serum.

Dr. M. Girsdansky of New York City reports on "Three Cases Treated with Antistreptococcus Serum." (*Pediatrics,* Vol. XII, p. 173).

Dr. Montague D. Makuna of "Treherbert" reports on "Anti-Streptococcic Serum in Puerperal Fever." As he believes this fever is rarely treated in this way he is tempted to relate a case under his care, as others may be encouraged to adopt the same line of treatment. His conclusions are as follows: "It is possible that the patient might have recovered without the serum treatment but the disease was certainly cut short by several weeks." (London *Lancet,* Vol. I for 1902, p. 963).

Dr. David Wilson, Jr. of Whiteabbey, County Antrim, Ireland also reports a puerperal fever case. He concludes as follows: "I think there can be no doubt the antistreptococcus serum saved her life. My only regret now is I did not use it two days earlier. As to the cause of the septicaemia, I cannot believe that the poison was introduced by my fingers, as I took every precaution before making an examination. The sanitary arrangements of the house were in a wretched state, and moisture simply poured down the walls of the bedroom." (*Brit. Med. Journ.,* Vol. I for 1902, p. 1207).

Dr. George E. Ranney of Lansing, Mich. writes on "The Relationship of Antistreptococcus Serum to the Treatment of Puerperal Sepsis." (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 1060).

Dr. Mary F. Hobart of Boston, Mass. has made "Use of Antistreptococcus Serum in a Case of Septicemia Following Mastoid Operation; Recovery." (*Boston Med. and Surg. Journ.,* Vol. CXLV, p. 641).

J. Ramsay Munro, Surgeon to the Bolton Infirmary (England) reports a case of acute septicemia following incomplete abortion treated by Antistreptococcus Serum in which recovery followed.

He concludes: "I feel certain that the reduction in temperature was due in this case, although other medication was not stopped, almost if not entirely to the antistreptococcus serum, as it definitely followed on both occasions within a very few hours after the injection." (*Brit. Med. Journ.,* Vol. I for 1902, p. 78).

Dr. H. W. Haydon of Wadebridge, Cornwall, England reports "A Case of Erysipelas Treated with Antistreptococcus Serum." (*Brit. Med. Journ.,* Vol. II for 1901, p. 981).

Dr. Valentin Jez of Vienna, Austria has recently used a Serum of his recommendation obtained (taken from a blister produced) from the same patient on which it is to be used, in cases of erysipelas. His experience extends to ten cases. (*Wien. Med. Wochensch.,* Vol. 51, p. 1618).

One of the newer methods of treating both acute and chronic rheumatism is by Antistreptococcic Serum.

Dr. R. J. Chipman of Portland, Oregon reports "A Case of Acute Articular Rheumatism with Pyemic Temperature Treated with Antistreptococcic Serum." (*Phila. Med. Journ.,* Vol. 9, p. 1166).

Dr. J. C. Wilson of Philadelphia, Penn. is now able to follow up his incomplete conclusions alluded to here last year with "A Further Report on Serum Therapy in Croupous Pneumonia."

Dr. H. F. Page also of Philadelphia assisted him in making this report. They tabulate the literature on the subject up to the present day, and finally have to draw the following discouraging conclusion:

"The extreme variations that occur in the course of the attack and in the mortality of croupous pneumonia as modified by the age of the patient, his habits, previous health, antecedent diseases and complications, render general statistics wholly unreliable in determining the efficacy of any plan of treatment. Furthermore, in the greater number of the foregoing cases the serum treatment has not been employed alone, but in conjunction with expectant symptomatic methods. For these reasons conclusions based upon the mortality percentages are unreliable. Our observations in the service of the German Hospital, now based upon 36 cases, have not encouraged us to continue the treatment of croupous pneumonia by the use of the antistreptococcic serum." (*Therapeutic Monthly,* Vol. I, p. 82).

Dr. Brice W. Goldsborough of Cambridge, Md. offers "A Contribution to the Treatment of Pneumonia with Antipneumococcic

Serum." He reports nine cases and concludes "that this remedy deserves a more thorough and a fairer trial at the hands of the profession." (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 1681).

Dr. George G. Sears of Boston, Mass. reports "Twelve Cases of Pneumonia Treated by Antipneumococcus Serum." He concludes that "the results obtained, considering the unsatisfactory nature of the material, seem to justify a further trial of this form of treatment. Greater success might have been obtained if it had been begun earlier in the disease, as it was given before the third day in but 4 cases." (*Boston Med. and Surg. Journ.,* Vol. CXLV, p. 639).

The Antidiphtheritic Serum has been used in ten cases of pneumonia by Drs. Landrieux and G. Legros of the Lariboisière Hospital (Paris). Two severe cases were fatal. They base their use of this particular Serum on the hypothesis of an increase in phagocytic action in addition to its specific antitoxic action. (*Journ. des Praticiens,* Vol. 15, p. 785).

The more extended use of Haffkine's Antiplague Vaccine by the British Government in India furnishes a set of statistics at this time which seem to be valuable evidence of its utility. A full report may be expected shortly.

Dr. J. J. Vassal, a French observer, presented a paper to the Paris Academy of Medicine on the use of Serumtherapy in bubonic plague. He treated 18 patients in four months on the Ile de la Reunion, France, with a mortality of 38.8 per cent. He was enabled to compare this result with the mortality in 51 patients who were not inoculated, showing a mortality of 80.3 per cent. He expresses his surprise at not being able to induce more than 50 persons to take a preventive injection of even 10 Cc. of the Serum. (*Bull. de l'Acad. de Med.,* Vol. XLVII, p. 611).

Dr. Richardière of Paris, France reported to the Paris Pediatric Society in February last his experience with the use of Antidiphtheritic Serum in prophylactic doses in cases of measles. He was encouraged to carry out this practice after having adopted the prophylactic injections in diphtheria cases coming into the Hospital. The preventive injection for every child admitted to the measles ward was from 5 to 10 Cc. He found it necessary to repeat the injection every 15 days. (*Gaz. hebdom. de Méd. et de Chirurg.,* Vol. 49, p. 187).

Prof. E. von Leyden of Berlin, Germany has reported his observations from experiments in the treatment of scarlet fever by injecting the Serum obtained from convalescents. He begins with 10 Cc. followed up by 20 Cc. and even increases the dose to 40 Cc. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 159).

Dr. Carlo Ceni of Reggio-Emilio, Italy was the successful competitor for the Craig Colony Prize for Original Research in Epilepsy. He wrote on "Sero-Therapy in Epilepsy." (*Med. News,* Vol. 80, pages 433 and 489).

Dr. H. A. Stevenson of London, Ontario, Canada reports on the use of Antitoxin in the treatment of distemper in a dog. He fully realizes that this one case is not sufficient to draw too general conclusions, but he feels so confident that it accomplished good that he concludes to certainly use it in all cases in future. (*Journ. of Compar. Med. and Vet. Archives,* Vol. XXIII, p. 116).

Skin eruptions following the administration of Diphtheria Antitoxin are still quite common, but are explainable on general principles in most cases.

Dr. Arthur Stanley, Health Officer of Shanghai, China reports "On Diphtheria Antitoxin Eruptions" in a series of 500 cases treated during two years' work in a diphtheria ward in China. He reports a death rate of 16 per cent. Out of 500 cases receiving Antitoxin, 112 showed eruptions. (*Brit. Med. Journ.,* Vol. I for 1902, p. 386).

At a meeting of the Paris Pediatric Society on March 10th last, Dr. Pochon related the case of a three months' old child in whom a polymorphous eruption quite all over the body occurred fifteen minutes after the injection of Antidiphtheritic Serum, and persisted for 12 hours when it disappeared. Drs. Guinon and Marfan discussed this case, and the former related a similar case in which edema developed an hour after the injection had been made. There was also delirium in his case. The edema disappeared in one hour. Dr. Marfan had never observed any edema following an injection. (*Gaz. hebdom. de Méd. et de Chirurg.,* Vol. 49, p. 285).

Dr. Gottfried Ritter von Rittershain has collected the data of cases for the past four years in which eruptions followed the injection of Antidiphtheritic Serum. Out of 1224 children who were injected 6.45 per cent. developed an eruption. In 25 per cent. of the eruption cases the eruption was local, in 72 general. According to his observations it is often very difficult to differentiate

the character of the eruption. (*Jahrbuch für Kinderheilkunde*, Vol. 55, p. 542).

A correspondent of the *British Medical Journal* writes to the Editor from St. Luke's Hospital, Chemulpo, Corea asking how long Antidiphtheritic Serum will retain its potency. He states that he lately had a case of diphtheria in a Corean child and he found that the only Serum he had on hand was a bottle almost two years old. He describes the conditions as follows: "I injected 10 c.cm. immediately, and gave another bottle to be taken by the mouth. The infection was pharyngeal but on the point of spreading to the larynx. The following day the membrane was much loosened, and another 10 c.cm. were given by the mouth and 10 c.cm. to be taken in the evening. On the third day there was only a small patch about an eighth of an inch in diameter left on the right tonsil. The patient was treated as an out-patient as we have no female ward in this hospital. I should like to hear if any of your readers have had good results from serum older than this was. It would be interesting to know how long the serum will retain its properties. This case also goes to show that the serum is almost or quite as effectual when swallowed as when injected." (*Brit. Med. Journ.*, Vol. I for 1902, p. 311).

Dr. E. Wolfenden Collins of Sydenham, England reports his experience with Rectal Serumtherapy, and finds that it so far accords absolutely with that of Dr. Chantemesse who in 1896 published some very favorable reports with this form of treatment in 20 cases, "laying stress upon the fact that in all of them the fluid was absorbed easily and quickly, without subsequent unpleasant or untoward effects, such as pyrexia, joint pains, or skin eruptions; noting also that the same effect was produced by the same dose of serum administered either subcutaneously or by the rectum." Dr. Collins cites one case now of his own, and feels "fully satisfied of the advantage of administering serum by the bowel owing to its efficacy, rapid action, absence of unpleasant sequelæ, and simplicity of employment; and it appears to me that this safe and easy method of serumtherapy has not received the attention it deserves." (*Brit. Med. Journ.*, Vol. II for 1901, p. 1660).

For the convenience of those who may desire to know where to look up the "Report of the Commission Appointed to Investigate the Cases of Tetanus in St. Louis Following the Administration of Diphtheria Antitoxin", it may be of use to record here that it will

be found in full in the *St. Louis Medical Review,* Vol. XLIV, p. 361.

The Camden, N. J. cases were not quite parallel to the St. Louis cases and should not therefore necessarily be classed with them. No definite scientific report has been noted by the writer.

Dr. Robert N. Willson of Philadelphia, Penn. reports an "Tetanus Appearing in the Course of Vaccinia; Report of a Case." (*Amer. Medicine,* Vol. II, p. 903).

Under this heading it may be of interest and somewhat appropriate to refer to the report of Dr. Léopold Lévi of Paris, France on Trunecek's Inorganic Serum in the treatment of arteriosclerosis. His Serum is a mixture of all the alkaline salts normally found in the blood, to which he has given the name of "Inorganic Serum." His formula is as follows:

Sodium Sulphate	0.44	grammes	(6.8	grains)
Sodium Chloride	4.92	"	(76.0	")
Sodium Phosphate	0.15	"	(2.42	")
Sodium Carbonate	0.21	"	(3.50	")
Potassium Sulphate	0.40	"	(6.20	")
Distilled Water to make	100.00	"	($3\frac{1}{2}$	ounces)

He begins by injecting 1 Cc. and increases by definite increments up to 5 Cc. every second, fourth or seventh day. He is pushing his investigations with it in the treatment of rheumatism, nervous affections and other conditions of congestion, with some promise. (*Presse Medicale,* Vol. for 1902, pages 51 and 63).

In relation to the Serum treatment of acute and chronic rheumatism, Dr. Menzer of Berlin, Germany has made a somewhat extended study in the line of producing a specific Serum. He now describes the progress he has made and although his cases are yet too few to draw any very definite conclusions, he is much encouraged. (*Zeitschrift für klin. Medicin,* Vol. XLVII, p. 109).

Antitussin (Di-Fluor-Di-Phenyl) has received practically no attention in the medical literature of the past year.

Argonin—the bactericide formed by mixing Silver Nitrate with a combination of Sodium and Casein—containing 4 per cent. of silver is still used to some extent, but at least one prominent observer reports that he has found this preparation inferior to both Protargol (8.3 per cent. of silver) and Largin (11.2 per cent. of silver).

Aristol (Di-Thymol-Di-Iodide) has been under criticism during the past year in regard to its purity, and samples have been found in which there was much less than the theoretical amount of Iodine. Inorganic matter also has been one of the contaminations as well as considerable amounts of chlorine in combination. There is a compound obtained by pouring an alkaline solution of thymol into a solution of sodium hypochlorite which closely resembles Aristol in appearance and therefore requires examination.

Among the varied uses of this agent Dr. Emanuel Fink of Hamburg, Germany has employed it in the treatment of hay fever. He insufflates the powder into the antrum of Highmore with favorable results. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 805).

Arrhénal (arrhén being the name once used for Arsenic) is the short name given to Di-Sodic Methyl Arsenate, manufactured originally in Paris and introduced by Dr. Armand Gautier. It is described as being in the form of long prismatic needles, soluble in 40 per cent. of water at 15°C. (60°F.) but insoluble in alcohol.

Dr. Gautier brought the subject up at a meeting of the Paris Academy of Medicine on February 11th last. It is claimed that it has no greater toxic properties than the cacodylates, but acts with greater therapeutic potency and can be administered by the mouth. He finds it of special value in malarial cachexia in which it acts far better than quinine. He has given as large a dose as 50 milligrammes ($\frac{4}{5}$ of a grain) three times a day and has never observed any toxic symptoms or even serious irritation throughout the intestinal tract. A dose of 20 milligrammes ($\frac{5}{16}$ of a grain) will often be sufficient. He administers the drug for from five to seven days without interruption, when he intermits for an equal period before resuming. Practically no other observers have reported, but undoubtedly something will be forthcoming before long. (*Bull. de l'Acad. de Med.,* Vol. XLVII, p. 189).

Aspirin (derived from the action of Acetic Anhydride on Salicylic Acid) has received considerable attention throughout the past year.

Dr. Jorgen Thesen, a Scandinavian observer, has used this agent in 12 cases of acute rheumatism and 12 cases of pleurisy. He reports that in the rheumatic cases the fever was rapidly reduced and the pain and swelling of the joints were appreciably relieved. He noticed fewer unfavorable effects than would have appeared with

any of the salicylates. He gives three tracings in his report. (*Norsk. Mag. for Laegevidensk,* Vol. 62, p. 986).

Prof. von Ssaweljew of Moscow, Russia has written on "Aspirin in Exudative Pleuritis." He relates one case in which he observed far less irritation occurring in the stomach than with the salicylates. He gave 36 grammes (555.6 grains) as a total in nine days. There was a very evident increase in the quantity of urine although the patient perspired as well, so that the exudation was rapidly absorbed. (*Allgemein. Med. Central-Zeitung,* Vol. 70, p. 621).

Drs. Johann Landau and Anton Schudmak of Cracow, Poland have carried on a series of observations in various children's diseases where they have closely observed how this agent is slowly split up in the small intestine when it meets the alkaline secretion. It thus enters the circulation slowly. The dose varied from 300 to 500 milligrammes ($4\frac{2}{3}$ to $7\frac{3}{4}$ grains) in children from five to nine years old. They found that it acts well as an antipyretic in typhoid fever and cerebral concussion where such drugs as citrophen and lactophenin failed. The action was more certain but slower than other antipyretics. It occasionally checked the frequency of the coughing attacks in pertussis. (*Die Heilkunde,* Vol. 5, p. 509).

Dr. D. K. Coverley of New York City writing on the "Treatment of Rheumatism and Allied Disorders" speaks of Aspirin as "the most eligible remedy for the treatment of rheumatism in its acute forms." He enumerates nine cases and concludes: "Without entering upon a discussion of other cases I would say that in my opinion aspirin is the most serviceable antirheumatic and antineuralgic we have in this class of patients." His dose varied all the way from 650 milligrammes (10 grains) once a day to 1 gramme (15.4 grains) three times a day. (*Ther. Gaz.,* Vol. XXV, p. 729).

Dr. J. A. Hale of Alto Pass, Ills. in writing on "Growing Pains; What Are They? Their Treatment", has found Aspirin devoid of those unfortunate defects following the use of the salicylates. (*Pediatrics,* Vol. XII, p. 50).

Dr. E. Guihal of Paris, France has written an article on "Aspirin. Its Therapeutic Properties", and speaks emphatically of its beneficial effects in acute rheumatism and pulmonary tuberculosis where the temperature is reduced promptly and permanently. The dose he gives varies from 260 milligrammes (4 grains) up to 4 grammes (61.7 grains), and he states that he has never found such

to be dangerous doses. (*Presse Médicale,* Volume for 1902, p. 305).

Dr. Görges of Berlin, Germany has given as high as 1 gramme (15.4 grains) daily to an eight year old child where salicylates had been previously given with less beneficial effects. He has found it of use in acute and chronic rheumatism, chorea, neuralgia and the like. (*Med. Press and Circular* for 1902, p. 653).

Dr. Sigmund Merkel of Nuremberg, Bavaria reports his experience in the form of "Further Communications upon Aspirin", in which he speaks favorably of its use in articular rheumatism, gout, dry and exudative pleurisy and muscular rheumatism. He met with no success in the treatment of sciatica and lumbago. He found that it was best given in 1 gramme (15.4 grains) doses in the afternoon every hour for four or five hours. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 357).

Dr. Jean Strobinder of Moscow, Russia calls attention to a peculiar action of Aspirin which occurred in his experience in the course of chronic pyelitis and gravel in which a polyneuritis of the right arm developed. He put the patient upon hot baths and local applications, and administered 1 gramme (15.4 grains) of Aspirin every three hours which brought relief within ten days. (*Allgem. Wien. Med. Zeitung,* Vol. XLVII, p. 124).

There have been a number of protests expressed in this country against the large doses usually given of this agent, notably by two careful observers, Dr. S. Solis-Cohen of Philadelphia, Penn., and Dr. Francis Delafield of New York City. Dr. Solis-Cohen has on more than one occasion spoken against large doses and urged caution in the use of the drug. He has seen cardiac collapse from much smaller doses than any mentioned above. He claims that good results can be obtained from doses of 325 milligrammes (5 grains) three times a day for an adult, and 65 milligrammes (1 grain) three times a day for a four year old child.

Dr. Delafield has unfortunately seen in his own practice two cases of poisoning from 325 milligrammes (5 grains). In one case the dose had been repeated every two hours and in the other every three hours. In his experience a dose of 130 milligrammes (2 grains) four times a day is fully as high as should be given. It has been suggested by those interested that the unfortunate experience of observers in this country as to the toxic effects from large doses, can only be explained by the use of Aspirin which had

undergone more or less decomposition. The foreign manufacturers themselves caution the user to avoid exposing it to heat and moisture as otherwise decomposition will occur with the liberation of salicylic acid. It is still claimed by foreign observers that if it is administered in the pure state the depressing effects do not occur, and therefore it is that this agent is to be preferred over the salicylates. It is thus important that whenever this agent is used assurance be obtained that it is free from decomposition.

Atoxyl is the name given to a new Amido-Benzene Compound of Arsenic having a definite formula and containing 37.69 per cent. of the oxide of arsenic. It appears in the form of a colorless, odorless and almost tasteless powder and what little taste it has is rather salty. It is soluble in one-fifth of its weight of warm water.

Dr. Ferdinand Blumenthal of Berlin, Germany has carried on a series of experiments with this agent on rabbits with the idea of determining its relative toxic properties. He finds it to be one-fortieth as toxic as Liq. Potass. Arsenitis. (*Med. Woch.,* Volume for 1902, p. 163). Further clinical reports are awaited from him.

Dr. Walther Schild of Berlin, Germany has given some attention to the various preparations of arsenic, and finds that none of them have been satisfactory up to the introduction of Atoxyl. His present experiments indicate that it is forty times less poisonous than its arsenic equivalent would show, thus furnishing a means of giving a large dose of arsenic without ill-effects. The largest field in which it has been used up to this time is in dermatological practice, and hypodermic injections are the preferable mode of administration. It was not as well tolerated when given by the mouth. Small doses are injected at first and increased up to 200 milligrammes (3 grains). (*Berlin. klin. Wochensch.,* Vol. XXXIX, p. 279).

Bacillol is still without an explanation of its composition, at least the prominent literature of the past year has failed to mention anything more concerning it than that it is an effective antiseptic containing 52 per cent. of cresol.

Dr. Cramer of Heidelberg, Germany is practically the only one reporting and he compares this agent with lysoform, preferring the former. He bases his preference on its cheapness, freedom from disagreeable odor and efficiency, as a 1 per cent. solution

destroys most organisms within eight minutes, and a 2 per cent. solution in one minute. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1595).

Bromeigon (the Albumin Compound of Bromine) is little heard of, although the so-called "Eigons" have been known for some time. It is claimed to contain the small proportion of 11 per cent. of Bromine, and Dr. James Silberstein of Vienna, Austria believes it thereby has value as a therapeutic agent. He has given it, in the form of powder, in doses of 5 grammes (77.2 grains) daily. (*Therap. Monats.,* Vol. XVI, p. 29).

Bromelin is the name which has been given to the digestive principle contained in fresh Pineapple juice. It is reported to act in a similar manner to Pepsin, as it furnishes a remarkably active digestive principle. As a result of experiment, it has digested as much as 1000 times its weight of proteids within a few hours. Fibrin is dissolved completely in a short time. Its action upon the coagulated albumin of eggs is comparatively slow whereas with the albumin of meat its action is complete in a short time, however producing a pulpy gelatinous mass as a first stage. The experiment can be tried very readily by placing a slice of fresh Pineapple on a raw beefsteak when the gradual digestive process will be very evident. Attention is called to the fact that cooking destroys this peculiar digestive principle. This digestive principle may be isolated by the action of common salt in excess on the Pineapple juice. Aside from repeating the above results of experiments little clinical comment has been made upon it during the past year.

Bromipin (the Compound of Bromine with Sesame Oil)—the substitute for the alkaloid and salts of Bromine—is still being used although the reports have been quite infrequent during the past year.

Dr. Johann Wolff of "Oberpulsgau" extols it as being far preferable to the Bromides. His successful cases were epileptics and various other neurotics. It apparently does not affect the appetite which is greatly in its favor. (*Allgem. Med. Central-Zeitung,* Vol. 70, p. 393).

In this country Dr. William P. Spratling of Sonyea, N. Y. has made some use of it. In a paper read before the College Medical Society of the College of Physicians and Surgeons in Baltimore,

Md. on December 6th last entitled "Epilepsy, Its Etiology, Pathology and Treatment Briefly Considered", Dr. Spratling gives the form of emulsion which he uses, as follows:

"Bromipin. .....4 ounces
Simple Syrup. .....4 "
Spirit of Peppermint. .....4 drachms
Mucilage of Acacia enough to make 16 ounces"

(*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 1126).

Bromocoll (a combination of Bromine, Tannin and Gelatin containing 20 per cent. of Bromine) is still being used, but almost entirely in Europe.

Drs. Reich and Ehrcke of Berlin, Germany have written an article entitled "Bromocoll, A New Bromine Remedy in the Treatment of Epilepsy." From their limited experience at this time upon which however they draw some definite conclusions, they are conservative enough to simply advise further trial, and to look for a wider use of it by the profession. (*Therap. Monats.,* Vol. XVI, p. 68).

Dr. R. Ledermann of Berlin, Germany reports favorable results in the trials he has made in all forms of nervous pruritus. He recommends its use also to allay the itching in various skin affections. (*Fortsch. der Med.,* Vol. 20, p. 457).

Chinosol (the Potassium Salt of a compound of Oxy-Chinolin and Sulphuric Acid, a fine yellow crystalline powder)—the antiseptic, disinfectant, deodorizer and bactericide—continues to be the favorite disinfectant among a certain number of surgeons. It is so much less poisonous than the majority that it should be an attractive agent to use if its other beneficial properties were found at least equal to the usual disinfectants.

Dr. Jos. Nottebaum of Remilly, near Metz, Germany finds it to be an efficient styptic in addition to its other properties. The chief objection to its use is that it attacks the instruments unless they are nickel-plated. Caution also has to be taken to use glass or china vessels to hold the solution. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 566).

Chinotropin is the name given to a derivative of Quinic Acid and Urotropin. It has not yet become generally known and only one prominent observer has reported. This is Dr. de la Camp of Berlin, Germany. He has made some very careful experiments

with quinic acid in the treatment of gout. He found it of some value in this line, and the effective dose in the majority of cases was from 5 to 6 grammes (77.2 to 92.6 grains) daily. It proved to be harmless even in as large doses as 20 to 30 grammes (308.6 to 463.0 grains) daily. His best results were obtained in those cases where a tendency was shown to form calculi. He illustrates with five tables and an extended bibliography in his report of these experiments. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1203).

Chloralose (Anhydro-Glyco-Chloral)—the hypnotic—has not been specially commented upon in the current medical literature of the year although undoubtedly it is still a useful agent and employed frequently.

Chloretone (Tri-Chlor-Butyl Alcohol)—the hypnotic and anæsthetic—has not been individually commented upon as frequently during the past year although it is still a prominent agent before the profession.

Dr. Wharton Sinkler of Philadelphia, Penn. publishes "A Note on Aceton-Chloroform (Chloretone) in Epilepsy" giving the clinical history of nine cases and draws favorable conclusions, but adds: "It remains to be seen for how long a time and in what doses the drug may be administered without producing ill effects." (*Therapeutic Monthly,* Vol. I, p. 86).

Dr. D. J. M'Carthy of Philadelphia, Penn. has also made use of Chloretone in epilepsy. (*Internat. Med. Mag.,* Vol. X, p. 462).

Dr. Luigi Cappelletti of Ferrara, Italy has written an article "On a New Hypnotic in Mental Disease: Chloretone." He gives the results of 25 cases and apparently was gratified to note that the digestion and the secretive organs were not disturbed in the majority of cases. (*Reforma Medica,* Vol. 4 for 1901, p. 614).

Dr. Solomon Solis-Cohen of Philadelphia, Penn. reports on an isolated observation which he deems of interest in view of the wide and increasing use of the various preparations of the adrenal gland in which an acute edema of the uvula, palate, pharynx and epiglottis, followed the excessive application of adrenal solution preserved with Chloretone. (*Med. News,* Vol. 79, p. 538).

Citrophen (Phenetidin Citrate) has been little heard of in the current medical literature of the past year.

The only prominent observer reporting is Dr. H. W. Syers of London, England on the "Efficacy of Citrophen from a Clinical Point of View." His favorable results were obtained as an anal-

gesic in the treatment of migraine, the headache produced by anemia, neuralgias of various kinds, lumbago, sciatica, chronic articular rheumatism and the very indefinite pains complained of in neurasthenia. In these latter cases the best results were obtained. He claims that it is not strictly an antipyretic, but in the case of slight pains it appears to have some value. His dose varied from 650 milligrammes to 1 gramme (about 10 to 15.4 grains). (*Treatment,* Vol. V, p. 814).

Cocaine and its salts show an additional increase in use even over the previous year. Unfortunately however its misuse and abuse are the chief causes for the increase. Its legitimate use in the hands of the practitioner is pretty steady or with only a slight comparative increase. Its field of application is quite limited but outside of this field there is a liberty taken with its use which is really very serious and is widespread all over the world.

A correspondent of the London *Lancet* wrote on October 19th last from India as follows: "The habit of cocaine-eating seems to have spread extensively among the natives of Bengal. The ordinary *pan*-sellers are the chief distributors. It is sold in small paper packets containing either half a grain or one grain which are obtained for half or one anna respectively. It is impossible to say how much is consumed by any one individual, but several grains a day have been confessed to. The sense of feeling well is followed by depression, but the habit appears to be peculiarly seductive, and once commenced is with the greatest difficulty abandoned. A blackening of the teeth is said to be caused by cocaine-eating and the blackening is thought to be characteristic. It is said to be most marked in the lower teeth and on the inner or posterior surface, and to be quite different from dirt or the staining of tobacco. The general symptoms are those of cachexia with a sallow look, sunken eyes, and emaciation." An "Anna" is 1-16 part of a rupee ($1\frac{1}{2}$ pence sterling) or about 3c. (London *Lancet,* Vol. II for 1901, p. 1301).

Dr. Kailas Chunder Bose reports from Calcutta, India on "Cocaine Intoxication and its Demoralizing Effects." He relates the clinical history of 10 cases. He states that: "To attempt to break the cocaine habit by substituting sulphonal or chloral is to induce the inebriates to consume both. The only remedy lies in locking inebriates up in asylums, and stopping their cocaine altogether." (*Brit. Med. Journ.,* Vol. I for 1902, p. 1020).

Dr. T. D. Crothers of Hartford, Conn. in writing at some length on "Cocainism", concludes that: "There is only one way of escape for these poor drug-victims, and that is to give up everything and make a supreme effort for recovery. With the assistance of some trusted physician, in changed conditions and surroundings and the most favorable circumstances possible, the prospect of permanent cure and restoration is most favorable." (*N. Y. State Journ. of Medicine,* Vol. I, p. 164).

The use of Cocaine to produce anæsthesia by sub-arachnoid injection has been considered under the head of "Anæsthetics."

Drs. Albarran and Cathélin read a report before the Paris Biological Society on July 13th last on the use of epidural injections of Cocaine in four patients suffering from incontinence of urine following tuberculosis, fracture of the spine and senility. They obtained successful results for a limited period but with intermissions. (*La Médecine Moderne,* Vol. 12, p. 231).

Dr. F. Linder of Munich, Bavaria has observed a number of cases of "Nasal Dysmenorrhea" in which the pain was apparently minimized by the use of Cocaine sprayed on the nasal mucous membrane, but fearing that suggestion might have something to do with the relief, he selected 10 cases and finally treated them with water. He thus proved that the results of cocainization were almost completely suggestive. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 922).

The application of a solution of Cocaine to the nasal and pharyngeal mucous membrane has been suggested to relieve the serious primary syncope at the commencement of chloroform anæsthesia due to the arrest of the cardio-respiratory reflex consequent on irritation of the termination of the trigeminus.

Dr. A. Pugnat of Geneva, Switzerland reports upon his use of Cocaine and menthol in the treatment of coryza. He uses the following formula:

Cocaine Hydrochlorate....	5.0	grammes	(77.2 grains)
Menthol	5.0	"	(77.2 ")
Liquid Vaselin	100.0	"	(about 4 ounces)

This mixture, sprayed into the nostril every three hours, gave more satisfaction than a simple Cocaine spray. (*La Sem. Méd.,* Vol. 22, p. 184).

Prof. Oefele, a French observer, expresses his preference for the

so-called Cocaine Phenate as a local anæsthetic, claiming that its action is more lasting, and less toxic effects are produced. He employs the following formulas: For local application to the pharynx and the tonsils:

Cocaine Phenate	1 gramme	(15.4 grains)
Absolute Alcohol 10	"	(154.3 ")

Hypodermically he uses:

Cocaine Phenate 0.10	gramme	(1.54 grains)
Dissolved in Alcohol.....5.00	grammes	(77.2 ")
Distilled Water added....5.00	"	(77.2 ")

Of this solution he introduces the contents of 1 to 3 syringes of Pravaz at each sitting. In affections of the larynx and bronchial tubes, he uses the following in the form of powder:

Cocaine Phenate 0.10	gramme	(1.54 grains)
Menthol 0.25	"	(3.86 ")
Dilute Alcohol 0.10	"	(1.54 ")

One-fifth of this total quantity is used daily. (*Journ. des Praticiens,* Vol. 15, p. 555.)

Cases of Cocaine poisoning, as generally understood, are not very frequent.

Dr. Kenneth Fraser of Wigan, England reports the case of a woman 59 years old suffering from rodent ulcer of the right orbit in whose case a 10 per cent. spray of Cocaine was applied twice a day to the surface of the ulcer. The symptoms which followed are described. Recovery followed. (London *Lancet,* Vol. II for 1901, p. 145).

Dr. Maurel reported at a meeting of the Paris Biological Society on July 6th last the results of his numerous physiological experiments on rabbits as to the manner in which Cocaine produces death. He enumerates five points established, and concludes that when given in sufficient quantities it either destroys the leucocytes or at least rapidly alters their form to spherical. (*Gaz. hebdom. de Med. et de Chirurg.,* Vol. 48, p. 653).

Dr. Albert C. Barnes of Philadelphia, Penn. reports "A Case of Morphine Poisoning; Successful Employment of Cocaine as an Antidote." He concludes: "Inasmuch as this patient's life was un-

questionably saved by cocaine, and as this latter remedy is the most rational physiological antagonist to morphine, it should find more general employment as an antidote. However, care must be exercised that the antidote be not given in too great quantities; in regard to this latter point the above mentioned case would seem to indicate that one-half grain of cocaine hydrochlorate may be given at half-hour intervals until consciousness returns and the respiratory and cardiac functions are sufficiently aroused. In this case, the stimulation was even more accentuated and extended to the spinal cord, producing convulsive movements." (*Phila. Med. Journ.,* Vol. 8, p. 1100).

Dr. Edward T. Reichert of Philadelphia, Penn. has made some careful experiments and now reports on "Antagonisms of Cocaine and Morphine, Especially Their Actions upon General Metabolism, and the Employment of Cocaine in Morphine Poisoning." He gives some interesting tables and tracings. (*Ther. Gaz.,* Vol. XXVI, pages 450 and 518).

Creosotal (so-called Creosote Carbonate) is still being used quite extensively but does not now call forth very frequent mention in the current literature. Three prominent observers however may be mentioned.

Dr. Leonard Weber of New York City reports on "Carbonate of Creosote as a Remedy for Pneumonia, with a Report of Nine Cases in which the Administration of it has been Followed by Remarkably Uniform and Good Results." (N. Y. *Med. Record,* Vol. 60, p. 681).

Dr. H. W. Cummings of Hearne, Texas gives the result of his experience in "The Treatment of Pneumonia, with Special Reference to Creosote." He prefers the Carbonate and begins with 10 drops every three hours and increases the dose by 5 drops daily until from 20 to 25 drops are reached. He finds that strychnia as a stimulant modifies the fever, lessens the severity of the cough and pain and produces other beneficial effects. His cases number 20 and he has no deaths so far. (*Texas Med. Journ.,* Vol. XVII, p. 195).

Dr. W. H. Thomson of New York City also reports on "Carbonate of Creosote in Pneumonia." He relates 18 cases. (N. Y. *Med. Record,* Vol. 61, p. 161).

Dr. Wilhelm Meitner of Wostitz, Austria reports on "Creosotal in Acute Non-Tubercular Diseases of the Respiratory Organs of

Nurslings and Children." He gives five interesting tables. (*Allgem. Med. Central-Zeitung,* Vol. 71, pages 74 and 85).

Creosote (Beechwood) still holds its own in comparison with other agents when tuberculosis is treated by drug medication. The hygienic treatment has been given greater prominence during the past year and can only rightly be compared with drug treatment when used separately. It will be generally admitted that Creosote is the agent most used, when the drug treatment be followed out.

Dr. James A. Borroughs of Asheville, N. C. has reported his "Nineteen Years' Experience with Creosote in Tuberculosis." He has records of some 2183 cases scattered over all points of the United States and the Provinces of Canada, showing that thirteen out of every fifteen patients were either taking Creosote or had had it prescribed. "These statistics are of value in arriving at a consensus of opinion of the profession to-day, when we observe that for the last seven years of this record, embracing more than one-half of the cases, seventeen out of eighteen were either taking creosote or had had it prescribed." He then draws the following deductions: "1. Selection of a creosote made by the double distillation of tar from beechwood is essential. 2. Large doses continued indefinitely do not irritate the stomach, but improve digestion. 3. Large doses are appropriated by the system as shown by clinical observations. 4. The drug in large doses is indicated in all stages of the disease. 5. For permanent results the drug in large doses should be continued for months after the absence of all physical signs or constitutional disturbance. 6. Creosote in large, continued doses is not only the most rational treatment, but gives the best clinical results of any one agent familiar to clinicians." (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 291).

Dr. Hugo Winternitz of Halle on the River Saale, Germany reiterates the claim of others before him that hygienic-dietetic therapeutics alone are not sufficient for the treatment of pulmonary affections. In an article on the treatment of pulmonary tuberculosis in hospitals he recommends strongly the use of Creosote even though it has such drawbacks as decreasing the appetite, disturbing the digestion and at times producing diarrhea. From his observations he finds that the various substitutes generally reduce somewhat the above disagreeable difficulties but do not remove them entirely. His preference however is for thiocol which contains 60 per cent. of

guaiacol (the principal constituent of Beechwood Creosote). (*The Therapist,* Vol. XII, p. 25).

Dr. Thomalla of Berlin, Germany reports a case of tuberculous meningitis in which Creosote administered in increasing doses proved of much value. The maximum daily quantity reached 4½ grammes (7 grains) divided in three doses and administered in capsules. (*Berliner klin. Wochensch.,* Vol. XXXIX, p. 565).

Dr. I. L. Van Zandt of Fort Worth, Texas publishes his "Observations on Seven Years' Use of Creosote in Pneumonia." He includes with his own experience personal letters from physicians to substantiate his conclusions. He however believes that better results can be obtained by smaller doses than usually given and at shorter intervals. He claims that he has had good results even from one drop of Creosote every three hours and he does not employ ordinarily any other medication. (*Southern Practitioner,* Vol. XXIII, p. 541).

Dr. George Higginson of Nashville, Tenn. reports "A Case of Traumatic Tetanus Treated with Beechwood Creosote Hypodermically." Antitoxin and Carbolic Acid gave no relief and Creosote in large doses was substituted. (*Nashville Journ. of Med. and Surg.,* Vol. XCI, p. 199).

Crurin is the short name given to a rhodonate of chinolin and bismuth. This name apparently was coined by the introducer on account of its action on ulcer of the leg.

Prof. E. Jacoby of Freiburg in the Breisgau district, Germany apparently is the only observer reporting at this time on its use in gonorrhea. He gives particular directions as to how to make up the solution for injection, and claims to show its value in inflammations of the urethra and cervix. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 905).

Dionin (Ethyl-Morphine Hydrochlorate)—the synthetic local analgesic—has probably had a larger use outside of ophthalmological practice during the past year than in the previous one.

Dr. Hubert Langes, in an article on the action of some new medicaments: Eumenol, Dionin and Stypticin, speaks of the use of Dionin in pulmonary tuberculosis in doses of 10 drops of a 10 per cent. solution three times a day. His results were varied, and he explains the action in the different cases. (*Therap. Monats.,* Vol. XV, p. 363).

Dr. A. Scherer of "Ruppertshain i. Th." relates twenty-two cases

of pulmonary tuberculosis in which Dionin was used and relief from the cough and other symptoms resulted. He reports no ill-effects and claims that its action is sedative and analgesic. He gives a list of references which will be of use to those who desire to follow up the subject. (*Therap. Monats.,* Vol. XVI, p. 126).

Dr. Sigmund Gottschalk reports on its use in 52 cases of pertussis. It apparently did not affect the duration of the cough but did rather diminish the severity and number of the spasms. After considerable careful experimentation he adopted the following doses, according to the age of the patient:

To a child just under one year he gave $\frac{1}{2}$ a milligramme ($\frac{1}{128}$ of a grain) every three hours.

To a child from 1 to 2 years of age 1 milligramme ($\frac{1}{64}$ of a grain) every three hours.

To a child from 2 to 4 years of age from $1\frac{1}{2}$ to 2 milligrammes ($\frac{1}{40}$ to $\frac{1}{30}$ of a grain) every three hours.

To a child from 5 to 8 years of age from 3 to 5 milligrammes ($\frac{1}{20}$ to $\frac{1}{12}$ of a grain) every three hours. (*Aerzt. Rundschau,* Vol. for 1901, p. 364).

Dr. Oscar Frankl of Vienna, Austria reports on his use of "Dionin in Gynecological Practice." It gave very satisfactory results especially in cases of dysmenorrhœa. He claims that the use of two special combinations whose formulas he gives, showed far better results than chloral in inflammatory changes of the uterine appendages. (*Therap. Monats.,* Vol. XVI, p. 286).

The ophthalmologists are still the largest users of this agent and only a few prominent references will be mentioned here.

Dr. Schmitz of Cologne, Rhenish Prussia reports on its use in five cases of ophthalmic affections and especially one case of parenchymatous keratitis. (*Woch. für Therap. und Hyg. des Auges,* Vol. IV, p. 304).

Dr. Bruno of Bordeaux, France has written on the action of Dionin on the eye and its therapeutic applications, going over the ground pretty completely. This article deserves consulting by those who are interested in this agent. (*Journ. des Science Méd. de Lille,* first half of Vol. XXV, p. 497).

At a meeting of the Paris Academy of Medicine recently Dr. Chanvel made a report from the memoir of Dr. A. Darier of Paris, France on the two agents Acoin and Dionin, reporting these "two local analgesics nearly free from toxicity." Dr. Darier used a 1

per cent. solution of Dionin as a local anæsthetic in the treatment of deep-seated pains in the eye. (*Journ. des Praticiens,* Vol. XVI, p. 110).

Diuretin (Sodio-Theobromine Salicylate) has been practically unheard of in the current medical literature of the past year.

Dormiol (the combination of chloral hydrate and amylene hydrate)—called sometimes in past years Amylene-Chloral—has not been heard of much more during the past year than in the previous one. General statements concerning it have continued to be repeated, reiterating the fact naturally that it is a hypnotic. The only observer making any report in the prominent medical journals was Dr. J. Hoppe of "Uchtspringe." He claims excellent results in his 11 cases, the majority of which were due to organic cerebral lesions and were complicated with hemiplegia. His mode of administration was by the rectum in the form of enemata containing 2.5 to 3 grammes (38.6 to 46.3 grains) in $\frac{1}{4}$ to $\frac{1}{3}$ of a litre (about $8\frac{1}{2}$ to $11\frac{1}{2}$ ounces). He reports that the attacks were cut short from the usual duration of several hours to 15 to 30 minutes. He is in much doubt as to its usefulness as a substitute for the bromides in the general treatment of epilepsy. He has obtained very satisfactory results in cases of simple sleeplessness combined with restlessness, in which cases he gives the agent by the mouth and in doses of 1 gramme (15.4 grains). (*Muench. Med. Wochensch.,* Vol. XLIX, p. 701).

Dymal—the short name given to a new compound stated to be Didymium Salicylate—has not been heard of in the current medical literature of the past year.

Epicarin (a combination of Beta-Naphthol and Creosotic Acid) has been practically unheard of in the current medical literature of the past year.

Erythrol Tetranitrate (Tetranitrin), although still used and heard of somewhat, has not called forth any special individual comment during the past year.

Ethyl Bromide (Hydrobromic Ether) has been given fully as much attention during the past year as in previous years. Some investigations have been going on in England in regard to the product as furnished to the medical profession there. Mr. J. P. Gilmour now publishes his "Notes on Commercial Samples of Ethyl Bromide" as the result of his three years' examination of some fifty samples. He reports as follows:

30 were utterly unfit for anæsthetic purposes, owing to the presence of deleterious compounds;

50 contained free hydrobromic acid;

2 contained free bromine;

20 had a distinct garlicky odor (phosphoretted hydrogen);

40 when subjected to the sulphuric acid test developed the characteristic coloration due to sulphur, ethylene and amyl compounds;

10 showed the yellow color said to indicate the presence of organic compounds of sulphur.

These experiments were undertaken by Mr. Gilmour for Dr. A. Brown Kelly of Glasgow, Scotland who was to publish an account of over 1100 cases in which he had used it successfully as an anæsthetic in minor throat and nose operations. (*Pharm. Journ.*, Fourth Series, Vol. XIV, p. 490).

A case of poisoning having occurred after the use of Ethylene Bromide, by mistake, as the dentist had ordered Ethyl Bromide, an investigation was undertaken in the Experimental Laboratory at Strassburg by Dr. D. Scherbatscheff of Moscow, Russia. He publishes his results in an article "On the Effects and After-effects of Ethyl and Ethylene Bromide." His final conclusion was that Ethyl Bromide produced no indirect ill-effects. (*Archiv. für Experiment. Pathol. und Pharmakol.*, Vol. 47, p. 1).

Ethyl Chloride (Muriatic Ether) still seems to be quite a favorite with many surgeons for short operations, especially about the head.

Dr. John Mackie of Nottingham, England reports having used "Ethyl Chloride as a General Anæsthetic in Nasal Surgery" 33 times—27 times on the turbinals and sinuses, 4 times in adenoids and twice in septal deformity. In addition he reports having given it for dentists and general surgeons 15 times, making in all 48 administrations. He speaks very enthusiastically of its use and advises a more extended employment by surgeons. (*Brit. Med. Journ.*; Vol. II for 1901, p. 896).

Other English laryngologists have reported favorably upon its use.

Surgeon Frank E. Marshall of England has made use of "Ethyl Chloride as a General Anæsthetic" in 46 dental cases with 2 failures, which he claims is a better record than with nitrous oxide gas. (*Liverpool Medico-Chirurg. Journ.*, Vol. XXI, p. 356).

From France come equally favorable reports. Dr. Aristide Mal-

herbe of Paris performs rapid anæsthesia by what he calls the compress method which consists in pouring from 2 to 4 grammes (30.9 to 61.7 grains) of this anæsthetic on a compress which is so applied over the mouth and nose as to completely exclude the air. He made a report on this method to the French Surgical Association at the 14th Congress held in Paris on October 21st last. Narcosis is quite complete in from 20 to 40 seconds and lasts from 3 to 4 minutes without excitement. If a second application is made an operation of from 15 to 20 minutes can be performed with safety. For operations of a longer period Dr. Malherbe uses chloroform in addition to the Ethyl Chloride. (*Presse Medicale,* second half of Vol. for 1901, p. 247).

Drs. Aristide Malherbe and J. Roubinovitch later reported to the French Academy of Medicine the details of their experimental and clinical researches on some 11 dogs, and afterwards in all some 700 patients ranging all the way from 2 months old to 60 years of age. They report that the narcosis produced resembles mentally the coma noticed in the last stages of alcoholic intoxication. They claim that the use of Ethyl Chloride before giving chloroform as the general anæsthetic gives excellent results. They tabulate their results for convenience in referring to them. (*Le Bull. Méd.,* Vol. 16, p. 551).

Dr. Fromaget of Bordeaux, France reports on "General Anæsthesia with Ethyl Chloride in Ophthalmology." His number of cases was 100. He has found the masks generally used very inconvenient and he therefore improvises a handkerchief cone and gives special directions. His results have been particularly favorable in operations upon children. (*Annales d'Oculistique,* Vol. CXXVI, p. 196).

Dr. Howitz reported on October 16th, 1901 his favorable results in the treatment of cancer by a freezing jet of Ethyl Chloride. Cauterization by means of a hot iron was a preliminary step in some cases. The spray is repeated every two or three days at first and later at much longer intervals. His cases now number twelve and his results are encouraging. (*Journ. des Praticiens,* Vol. XVI, p. 156).

Ethyl Iodide (Hydriodic Ether) has not had as wide a use or been as freely experimented with as the other Ethyl anæsthetics during the past year.

Drs. Bardet and Ch. Amat of Paris, France have been making

use of it in cases of pertussis by reason of its favorable action in asthma. Their administration of it to children in a wide mouth bottle produces a marked decrease in the number and activity of the spasms, being reduced from 40 a day to 6, and the six attacks were less severe. Especially favorable results occurred in two rebellious cases. (*La Sem. Méd.,* Vol. 22, p. 216).

Eucaine (Benzoyl-Vinyl-Di-Aceton-Alkamin) is still very largely used, and its identification becomes more important. A chemist Mr. Charles Lathrop Parsons of "New Hampshire College" has made a study of "The Identification and Properties of α- and β-Eucaine." (*Amer. Journ. of Pharmacy,* Vol. 74, pages 194 and 236).

It would be quite impracticable to enumerate here all the reports of cases appearing during the past year. It may however be of interest to some to read this one report of "A New Method for the Removal of Internal Hemorrhoids Under Local Anæsthesia" by Dr. Thomas Charles Martin of Cleveland, Ohio in which he uses a one-tenth of 1 per cent. Solution of Eucaine by infiltrating the summit of each tumor by means of a very fine, long tapered needle. (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 1076).

Dr. Paul Cohn of Berlin, Germany reports the results of his tests with a new form of Eucaine, the Acetate of β-Eucaine. The number of administrations was 100, 80 of which were upon those having some eye affection and 20 were on normal eyes. After many trials he finally settled down to a 2 per cent. aqueous solution as being the most adaptable. (*Med. Woche,* Vol. for 1901, p. 385).

Eucalyptus Globulus was recently extolled as an effectual remedy in the treatment of diabetes mellitus by Mr. Arch. Galbraith Faulds of Glasgow, Scotland, but as far as trials have resulted in this country not much encouragement has yet been noted. The trials are not yet completed to be sure but it is feared that the original report was either over-enthusiastic or misguided.

Euchinin (Euquinine)—the compound formed by the reaction between Ethyl Chloro-Carbonate and Quinine—is still being used, particularly in Europe as a successful substitute for quinine when given to children. A correspondent from Switzerland to the Editor of the London *Lancet* writes (Vol. II for 1901, p. 177) that Dr. Theodore Zangger has published a résumé of upwards of 100 cases of pertussis treated particularly by the various preparations of quinine, and Euchinin was one of them. Its tastelessness

is the most redeeming feature. The dose given in the form of powder was from 130 to 390 milligrammes (2 to 6 grains) given two or three times a day before meals.

Dr. Rocaz of Bordeaux, France has used this agent as a general substitute for quinine in children. His dose varied from one and a half to two times greater than quinine. (*Gaz. hebdom. de Méd. et de Chirurg.,* Vol. 49, p. 190).

Eupyrin (chemically Para-Phenetidin-Vanillin-Ethyl Carbonate)—the new antipyretic of last year—has not been heard of in the current medical literature of the past year.

Europhen (Iso-Butyl-Ortho-Cresol Iodide) is still a useful agent and constantly used. Only one allusion is called for here this year and that is from Dr. W. E. Thomas of Brooklyn, N. Y. He has to offer "Some New Therapeutic Applications of Europhen". After enumerating them in his article he concludes:

"From this experience with europhen it seems that in this drug we have an iodin compound fully as efficacious as iodoform in surgery; and internally a most reliable and satisfactory means of giving iodin. Owing to its low specific gravity, and its twofold antiseptic power due to the setting free of cresol and nascent iodin, it would seem that at last we have a safe and reliable antiseptic." (*Amer. Medicine,* Vol. II, p. 182).

Exalgin (Methyl-Acetanilid)—the analgesic—is still prominently before the profession but is considerably restricted in its general usefulness to the profession, by reason of the name being trademarked. There are still poisoning cases being recorded, even following small doses. One of the most recently reported is that of Dr. Otto Seifert of Würzburg, Bavaria in a paper published by him "On Exalgin Poisoning." (*Wien. klin. Rundschau,* Vol. XVI, p. 525).

Ferratin (Acid Albuminate of Iron) has been little heard of in the current literature of this country but is still heard of more frequently in that of Europe.

Drs. B. Vaison and G. Astolfoni of Padua, Italy have made a report "On the Therapeutic Value of Ferratin", in which they publish their results of 13 cases of anemia successfully treated. (*La Riforma Medica,* Vol. II for 1902, p. 603).

Ferropyrin (Ferripyrin)—the hæmostatic compound of ferric chloride and antipyrin—has been practically unheard of in the

current medical literature of the year except in the way of repetition.

Fersan (the iron compound obtained from the red corpuscles of fresh ox blood) has been practically unheard of in the current medical literature of the past year.

Formaldehyde—the antiseptic, disinfectant, deodorizer and germicide—is now quite the general and favorite disinfectant, having in some quarters recently completely displaced the burning of sulphur. Various combinations have been recommended and are actually in use. A mixture of Formaldehyde with soap with a little heat produces a disinfectant soluble in water and without odor.

Mixing Formaldehyde with ammonia also produces an odorless combination which is an efficient deodorizer. The use of this combination is recommended by Dr. Alfred Martinet of Paris, France. (*La Presse Médicale,* first half of Vol. for 1902, p. 412).

Dr. Charles P. Noble of Philadelphia, Penn. writes on "Formalin as a Disinfectant for the Hands: an Unpleasant Personal Experience", in which he states that: "This experience is reported not to warn others against the use of formalin solution for hand disinfection, but to teach the importance of avoiding a prolonged contact with even a dilute solution of this agent." (*Amer. Medicine,* Vol. II, p. 939).

There are still many forms of apparatus offered for the application of Formaldehyde vapor but so far the simplest are the most effective and surely the cheapest. A firm in Leeds, England offers a very compact and simple spray apparatus, a cut of which is shown in the London *Lancet* (Vol. II for 1902, p. 83).

Dr. Harold G. Goldberg of Philadelphia, Penn. recommends "A Simple Formalin Method of Preserving Eye-Specimens." A description of his formalin-gelatin method is given in *American Medicine* (Vol. III, p. 299).

A report comes from England of "a new apparatus for preserving the cadaver by means of the vapour of formic aldehyde, a method which appears to have some great advantages over other methods at present in use." The apparatus "consists essentially of an air-tight chamber containing two parts—a chamber in which the body is placed called the disinfecting chamber, and one in which the formic aldehyde is volatilised called the evaporating chamber, with an electric fan, driven by a motor, which is used to circulate the

vapour from one chamber to the other." . . . . . .

. . . . . .

"Among the purposes to which the apparatus may be applied are for medical schools (the process in no way interfering with injection of the vessels); in criminal cases, particularly in death from violence and in cases of murder by poisoning (in this relation the fact that the presence of clothing on the body does not hinder the process is of importance); in embalming and for use on board ship where there is objection to interment at sea; and for purposes of exposing bodies to public inspection. Among other places in which the apparatus is already in use are the Zoological Laboratory of the University of Brussels, the public mortuaries of Brussels, in some of the Hamburg hospitals, and in Russia." (*Brit. Med. Journ.*, Vol. II for 1901, p. 1287).

Dr. A. Goldspohn of Chicago, Ills. publishes "A Preliminary Report on Sterilization of Rubber Gloves, etc., by Formaldehyde Gas, and on the Use of Mild Antiseptics Inside the Gloves." (*Amer. Medicine,* Vol. III, p. 952).

Dr. Crowry Muthu of St. Lawrence, I. W. makes use of "The Inhalation of Formic Aldehyde as an Aid in the Open-air Treatment of Pulmonary Tuberculosis." His results have been so satisfactory that he strongly urges a fair trial in every sanatorium where the open-air treatment is carried out. (*Phila. Med. Journ.*, Vol. 8. p. 365).

Dr. Robert Maguire of Seymour street, London, W. England reported at the Sixty-ninth Annual Meeting of the British Medical Association on the treatment of pulmonary tuberculosis by means of intravenous injections of Formaldehyde. Some results have already been obtained in over 100 cases but the observations are still being continued, and before even a preliminary report is made Dr. Maguire does not sanction any positive assertions.

Dr. Adolph Bronner of Bradford, England publishes his "Notes on a Case of Recurrent Papillomata of the Larynx in an Adult Treated Locally by Formalin. (*Brit. Med. Journ.*, Vol. II for 1901, p. 885).

Dr. John Moir of Edinburgh, Scotland recommends the use of Formalin-gelatin (Glutol) mixed with a soft paraffin in the proportion of 1 to 4 or 1 to 8 as a preventive of severe pitting and deep scars from smallpox. (London *Lancet,* Vol. I for 1902, p. 1053).

Drs. P. Soloviev and Demidov, two Russian military surgeons, have successfully treated favus with Formaldehyde by means of a compress wetted with a 5 to 8 or even a 10 per cent. solution of Formaldehyde. (*La Sem. Méd.,* Vol. 21, p. 336).

Dr. Theodore Fisher of Bristol, England publishes a clinical note on "Eczema Produced by Formalin." (*Brit. Journ. of Dermatol.,* Vol. XIII, p. 306).

Dr. Karl Dohrn of Dresden, Germany recommends the external application of a liquid soap made with from 5 to 10 per cent. of Formaldehyde and either linseed or olive oil in the treatment of night sweats, particularly in children. In the 12 cases in which he used this soap he observed a complete disappearance of the sweating in 7, in 4 it was markedly diminished and in the remaining case the treatment was interrupted early on account of the irritation of the conjunctiva. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 755).

Dr. Fr. Torggler of Klagenfurth, Austria recommends the use of Formaldehyde in inoperable carcinoma of the uterus. His cases number 150 extending over a period of some four years, and his general experience has been extremely satisfactory. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1212).

A combination of Formaldehyde, Menthol and Hydrochloric Acid has been given the short name of "Forman", and has been recommended as useful in the treatment by inhalation of "cold in the head."

Dr. Hermann Suchannek of Zurich, Switzerland writes on the limitation of this combination and recommends its use especially in the early stages of an acute nasal or laryngeal catarrh. (*Fortschrit. der Med.,* Vol. 20, p. 81).

Glonoin (Nitroglycerin) is still largely employed, but little special comment is now made on it in the current medical literature. Two observers however have taken pains to make special mention of its use.

Dr. H. E. Randall of Lapeer, Mich. writes "On Therapeutic Action of Nitro-glycerin: A Valuable Drug for Relieving Muscular Spasms." He closes as follows: "Nitro-glycerin is one of our most valuable drugs, but at all times should be used with caution and knowledge of exactly what you are using it for and what you may expect. In nitro-glycerin we have a valuable remedy for

spasmodic affections and it is worthy of a more extended trial and use by physicians." (*Therapeutic Monthly,* Vol. I, p. 239).

Dr. Alfred Gordon of Philadelphia, Penn. writes on "The Effect of Nitroglycerine in Vascular Disturbances of some Functions of the Brain, with Reports of Two Cases." (*Therapeutic Monthly,* Vol. I, p. 278).

Glutannol is the name given to a new combination of Tannin (Tannic Acid) and vegetable fibrin. It is claimed to have the same action and properties as tannalbin and tannocol, being an intestinal astringent. It is administered in the form of a powder in doses varying from 250 milligrammes to 1 gramme (about 3.86 to 15.4 grains) for adults, and from 250 to 500 milligrammes (about 3.86 to 7.7 grains) for children. There have been no definite clinical reports as yet in the medical literature, but only the claim to be of value in most intestinal troubles.

Gluton is the name given to a product obtained by treating gelatin with an acid solution for some hours at a high temperature, neutralizing the resulting product, filtering and evaporating to dryness to produce a powder of a slightly yellowish tinge, readily soluble in water and which does not gelatinize even in a concentrated solution.

Dr. H. Brat of Rummelsburg, Prussia had previously been seeking a more suitable form of gelatin which could be taken in larger quantities than was heretofore permissible. He therefore evolved this new product. In his experience with it he finds that it can be eaten with other articles of diet or in the form of either a hot or cold drink with lemon juice and sugar. He gives in detail the metabolic changes noted in his experiments. (*Deut. Med. Wochensch.,* Vol. XXVIII, p. 21).

Glycosal is the compounded name of the Glycerin Ester of Mono-Salicylic Acid and is offered as a substitute for the salicylates. There are as yet no clinical reports on this article but it is reported as being offered in the form of fine colorless crystals, soluble in 100 parts of cold water. It is claimed that this combination is better tolerated than the salicylates or even salicylic acid and yet it possesses the full antirheumatic properties of the acid and its salts.

Guaiacol (now synthetically produced from Pyro-Catechin) has undoubtedly been as largely used during this past year as in the previous year. It would be quite impracticable to enumerate

here every report in which this agent was mentioned, so that only a few of the typical ones will be recorded.

Dr. B. K. Rachford of Cincinnati, Ohio has made quite a study of the "Treatment of Tuberculosis in Infancy and Childhood with Special Reference to the Use of Guaiacol." His use of it now extends over some eight years and he is quite convinced of its great value. The prescription he recommends is as follows:

Guaiacol	4.00	grammes	(about 1 drachm)
Lanolin	8.00	"	(" 2 drachms)
Lard 20.00		"	(" 5 ")

His mode of application is to rub into the chest before retiring at night one even teaspoonful. In his experience the milder cases without acute symptoms are better treated by internal administration of Duotal (Guaiacol Carbonate). (*Archiv. of Ped.,* Vol. XVIII, p. 907).

Dr. N. Lavrov feels called upon to protest against the undoubtedly large doses given of Guaiacol in the treatment of tuberculosis, by reason of which unfavorable symptoms have developed and have discouraged the further use of this agent. He believes that these distressing results can be avoided by a procedure which he follows and which is recommended in his article. He confines his applications to from 500 milligrammes to 2 grammes (7.7 to 30.9 grains) as a maximum. (*La Sem. Méd.,* Vol. 22, p. 168).

Dr. J. Homer Coulter of Chicago, Ills. has written on "The Guaiacol Treatment of Laryngeal Tuberculosis." He begins with a 20 per cent. solution which he increases up to 80 per cent. or even to full strength. (*Chicago Clinic,* Vol. XIV, p. 325).

Dr. Alfredo Bocchi of the University of Modena, Italy reports very satisfactory results in the treatment of gonorrheal epididymitis and orchitis by using a combination of Guaiacol and vaselin:

Guaiacol	1 part
Vaselin 10	parts

He uses Salol internally in conjunction. The number of his cases was ten and the greatest relief was noted in those cases in which the attacks had been recent. Complete recovery resulted in from 12 to 13 days. (*Gaz. degli Osped. e delle Cliniche,* Vol. XXIII, p. 252).

Dr. Benjamin H. Brodnax of Brodnax, La. lends his testimony

to the benefits derived from the external application of Guaiacol. He states that if a few drops of the full strength liquid preparation of Guaiacol be rubbed gently over a region rendered painful from any cause, the pain will cease in less than a minute's time. He has made repeated use of this application to relieve the pain caused by uterine contraction in confinement, torticollis, ciliary neuralgia, neuralgic headache and toothache. The relief has been so rapid in some cases that the patient has almost imagined that some magical effect has been produced.

Guaiaform is the name given to a condensation product of two molecules of Guaiacol to one of Formaldehyde and went previously by the name of "Geoform." It is claimed to contain 95.38 per cent. of Guaiacol. It is offered in the form of a yellow, odorless and tasteless powder which is stated to develop a vanilla-like odor when kept for some time. It is insoluble in water but readily soluble in alcohol and ether.

There are no clinical reports on it as yet in the current medical literature, but it is stated to be useful in pulmonary tuberculosis and typhoid fever.

There has been offered also a Phosphate and a Benzoate of Guaiacol. The Phosphate is claimed to be less toxic than either Guaiacol or Creosote and to contain 89.4 per cent. of the former. No clinical results are yet reported on the Phosphate but Dr. Samuel E. Earp of Indianapolis, Ind. speaks of "Some of the Uses of Benzoate of Guaiacol, with Illustrative Cases." (*Cincinnati Lancet-Clinic,* Vol. XLVIII, p. 193).

A derivative resulting from the action of Cinnamic Acid on Guaiacol has been called "Ferissol." It is offered in the form of a powder readily soluble in water. The only observer reporting on its use so far is an Italian practitioner, Dr. E. Secreti, who used it in six cases of tuberculosis. In four of his cases very satisfactory results were obtained. It was introduced intramuscularly in the form of a 10 per cent. solution, and each injection consisted of the contents of one Pravaz syringe. Each injection was followed up by a dose of 1 gramme (15.4 grains) by the mouth. He found that the dose can safely be increased to 3 Cc. (48.7 minims) by injection and 3 grammes (46.3 grains) of the powder per day. (*Rev. de Therap.,* Vol. 69, p. 312).

Hedonal (the Ester of Methyl-Propyl-Carbinol-Carbamic Acid)—the hypnotic—although still much in use by some practi-

tioners is not commented upon individually in the current medical literature of the past year.

Heroin (claimed to be a Di-Acetic Ester of Morphine) has lost none of its prominence during the past year.

Dr. G. W. Wood of Washington, D. C. has made "A Study of the Indications and Contra-indications of Heroin." His cases were mostly those of bronchitis, pulmonary tuberculosis and Bright's disease, but there were ten cases in all in which it showed decided advantages. He saw no tendency to form a Heroin habit. (*Cincinnati Lancet-Clinic,* Vol. XLVII, p. 529).

Dr. J. Elischer of Buda Pesth, Hungary has studied this agent in the form of the Hydrochloride as a local analgesic. His experiments were apparently confined to local applications to the female genital tract, using it on glycerin tampons of a strength of 1 to 1000. His favorable results lead him to conclude that it is a useful agent in conjunction with other forms of treatment in incurable cancerous affections. (*Die Heilkunde,* Vol. VI, p. 62).

Dr. Maurice B. Ahlborn of Wilkes Barre, Penn. gives a detailed account of a plan for treating morphinomania of long standing by the use of Heroin. (*N. Y. Med. Journ.,* Vol. LXXIV, p. 235).

Dr. Jean Leyina de la Jarrige has written a thesis on the subject of "Heroin-Heroinomania", believing that there is such a thing as a Heroin habit and therefore this agent is unsuitable in the treatment of morphinomania. (*Med. Press and Circ.,* Vol. for 1902, p. 664).

A correspondent writes to the Editor of the *British Medical Journal* (Vol. II for 1901, p. 1312) to relate a case of Heroin poisoning in which he himself took an overdose of Heroin estimated at about 100 milligrammes (about 1½ grains), not knowing the amount. Without giving the details of his symptoms he concludes: "I do not know whether to ascribe my escape to having little in my stomach that day, but no doubt the repeated vomiting was a useful factor."

At a meeting of the Liverpool Medical Institution on November 21st last, Dr. W. Macfie Campbell stated that he had been in the habit of using Heroin Hydrochlorate in doses of one-sixth grain (10 milligrammes), but recently he had had an alarming experience with a one-twelfth grain dose (about 5 milligrammes). He took occasion however to express his satisfaction with it in the treatment of laryngeal cough. (London *Lancet,* Vol. II for 1901, p 1587).

Hetol (Sodium Cinnamate) is still one of the numerous agents being used in the treatment of pulmonary tuberculosis by those who believe in treating by medication.

Dr. H. Guttmann of Berlin, Germany has carefully gone over the whole subject of the use of this agent in the treatment of tuberculosis. His general conclusions are that the statements of Dr. A. Landerer of Stuttgart, Germany, who introduced it, can be fully confirmed. The 33 cases of pulmonary and laryngeal tuberculosis treated by Dr. Guttmann extended from December 18th, 1899 to April 10th, 1901 and he made use of intravenous injections as recommended by Dr. Landerer. In his experiments on rabbits he found that the leucocytes increased from 8,000 to 31,440 in four hours, and when given to the human subject they increased to 20,000. He finds that the effects can be grouped into four stages and he relates these in detail, giving the technique of the injections. (*Berlin. klin. Wochensch.,* Vol. XXXVIII, p. 716).

Dr. Erwin Franck of Berlin, Germany reports 13 cases of pulmonary tuberculosis in his private practice treated with Hetol. Five were complicated, and did not improve at all under this treatment; six showed an improvement which was maintained and two could be classed simply as improved. Dr. Franck is one of those observers who believe that open air and excess of feeding are not sufficient to cure even uncomplicated cases of pulmonary tuberculosis. (*Therap. Monats.,* Vol. XV, p. 611).

Dr. Theodor Heusser of Davos-Platz, Switzerland now adds to his 22 cases previously reported some 60 more in "The Treatment of Tuberculosis with Cinnamic Acid (Hetol)." From his experience he would conclude that Hetol is more effective than any other remedy yet recommended for the treatment of this affection. (*Correspondenzbl. für Schweiz. Aerzte,* Vol. XXXII, p. 2).

Dr. Alfred Mann of Denver, Colo. publishes "A Further Report on Cases of Tuberculosis Treated by Intravenous Injections of Sodium Cinnamate." He gives the details of seven new cases. (*Phila. Med. Journ.,* Vol. 9, p. 410).

Dr. O. Amrein of Arosa, Switzerland writes on "The Hetol Treatment of Tuberculosis", in which he brings forward his results obtained during the period from 1899 to 1901. He gives a "table setting forth all the observed effects of the Hetol treatment of tuberculosis in 13 cases." He finds that his table shows about the same results as those obtained by Dr. A. Staub at the Sanatorium

Wald-Zürich, Switzerland, in that no harmful influence was apparent and that he "never could see any positive good effect which I could not explain to myself by the climatological (altitude) and hygienic and dietetic treatment." (London *Lancet,* Vol. II for 1902, p. 67).

Dr. Max Wolff of Berlin, Germany reports either absolutely negative or quite indifferent results from his experiments on rabbits by subcutaneous and intravenous injections of Hetol and with inhalations of Igazol. He reports that he could not see that the lives of any of the animals were at all prolonged, and when given to patients clinically he has seen harm rather than good follow. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 457).

Honthin (stated to be a modified Albumin Tannate) has been rarely commented upon in the current medical literature of the past year. Two observers however, Drs. W. Tischer and A. Beddies, have made some "Investigations with Honthin as an Antidiarrheal Agent." Their cases were only a few and of a varied kind. They reported that Honthin acted satisfactorily. (*Archiv für Verdauungskrankh.,* Vol. VII, p. 583).

Hydrogen Dioxide has broadened the scope of its usefulness considerably during the past year, as the surgeons are making quite a varied use of the solution. It is still however used to some extent by the general practitioner in the treatment of diphtheria.

Dr. N. Novikov, a Russian military practitioner, reports having used this agent alone in the treatment of diphtheria. He is enabled to report a number of "cures" quite equal to the number reported after antidiphtheritic serum. He makes use of a 3 per cent. solution as a gargle, employing it liberally both day and night at short intervals. In young children however he prescribes internally:

Hydrogen Dioxide..	5.0 to 7.0	grammes	(77.2 to 108 grains)
Distilled Water. 85.0		"	(3 ounces)
Simple Syrup. 15.0		"	(231.5 grains)

of which the dose is a coffee or dessert spoonful every one or two hours. (*La Sem. Méd.,* Vol. 22, p. 216.)

Dr. Charles Herbert Gunson of Wisbeach, England makes use of this agent in the treatment of lupus vulgaris and tubercular abscess. He relates three illustrative cases among others and considers it "a valuable agent which as a surgical dressing deserves to

win its way to a high place in the list of surgical applications." (*Brit. Med. Journ.,* Vol. I for 1902, p. 448).

Dr. W. J. Midelton of Bournemouth, England noticing Dr. Gunson's report states that he has now been using this agent for about twelve months, but not alone. He used it in conjunction with raw meat juice. He claims that the Dioxide is not only more readily broken up by the juice but the latter is of great value in nourishing half-dead tissue. He enumerates a few of his cases. (*Brit. Med. Journ.,* Vol. I for 1902, p. 756).

Dr. H. Roger has undertaken "Lavage of the Intestines with Hydrogen Dioxid." He reports very prompt results in cases of colitis accompanied with dysentery. He injects a pint or a quart of diluted Hydrogen Dioxide from one to three times a day when other measures have failed. He gives the detail of its use. (*Presse Medicale,* first half of Vol. 10, p. 7).

It will be quite impracticable to continue an enumeration here of all the present uses in the surgical line.

Dr. J. Courtin of Bordeaux, France reports successful results in the treatment of chilblains, either with or without ulceration, after using Hydrogen Dioxide. His plan is to immerse the hand or foot for half an hour each day in a solution made by adding warm boiled water to the Hydrogen Dioxide. Where ulceration is present he adds a saturated solution of sodium borate. (*La Sem. Méd.,* Vol. 22, p. 40).

Hypnopyrin is the name given to a new hypnotic mixture described as a chlorine derivative of quinine, and is offered as an effective analgesic and antipyretic. It appears in the form of fine crystals having an extremely bitter taste, soluble in about eight times its weight of water, but readily soluble in boiling water and alcohol, insoluble in ether and chloroform. It is recommended as effective in the treatment of rheumatism, migraine and various forms of neuralgia, in doses not over 2 grammes (30.9 grains) in 24 hours for an adult. There are as yet no clinical reports on record. (*Journ. des Praticiens,* Vol. XVI, p. 344).

Ichthargan (a combination of Silver with Ichthyol-Sulphonic Acid) has been given considerable attention during the past year.

Dr. F. Block of Hanover, Prussia reports it to be of considerable value in the form of an injection for gonorrhea. He uses a solution of 0.02 to 0.2 per cent. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 756).

Dr. Rietema of Rotterdam, Holland reports on the use of it in a number of cases of chronic gleet. The strength of his solution is 0.01 to 0.02 per cent. In some few cases he used as strong a solution as 2 per cent. (*Monats. für Prakt. Dermatol.,* Vol. XXXII, p. 27).

Dr. Leo Leistikow of Hamburg, Germany whose report of its use in the treatment of acute anterior gonorrhea was referred to here last year, now writes concerning his two years' experience in chronic gonorrhea. His cases numbered 108, and the duration of the affection was not less than three months. He differentiates the cases into six groups, and seems to favor this agent made up according to the following formula which he introduces on a heated sound which has been passed back and forth over this ointment:

Ichthargan.	1.0 gramme	(15.4 grains)
Yellow Wax.	2.0 grammes	(30.9 ")
Cacao Butter sufficient to make.	17.0 "	(262.3 ")

(*Monats. für Prakt. Dermatol.,* Vol. XXXIII, p. 328).

Dr. P. Taenzer of Bremen, Germany believes this agent to be a permanent one in the hands of the genito-urinary surgeons. In a paper "On the Treatment of Gonorrhea", he extols its advantages and explains in detail his general method of treatment. He uses a 1 per cent. solution injected daily into the anterior urethra. (*Monats. für Prakt. Dermatol.,* Vol. XXXIV, p. 331).

Dr. Edmund Saalfeld of Berlin, Germany reports that he finds this agent when used locally, to be one of the most useful in his practice. In acute gonorrhea he injects a solution varying all the way from 0.06 of a gramme (1 grain) up to 0.075 and 0.1 (1½ grains) in 200 grammes (about 7 ounces), injecting every three hours. He has however used as strong a solution as 5 per cent. In treating gonorrhea in the female he steeps strips of gauze in a 1 per cent. solution and packs them into the vagina. (*Therap. Monats.,* Vol. XVI, p. 137).

Dr. Berthold Goldberg of Wildungen, (Cologne) Germany reports on its use in sixty cases. The strength of his solution averaged from 1 in 3000 to 1 in 2000 but he often used up to 1 in 500. In half of his cases the duration of the trouble was less than four weeks. He relates in detail a few illustrative cases. (*Therap. Monats.,* Vol. XVI, p. 140).

Dr. Beaman Douglas of New York City read a paper before the

Section on Laryngology of the New York Academy of Medicine on March 24th last on "Ichthargan: Its Use in Nose and Throat Diseases." In his experience it is an effective anæsthetic, antiseptic, antiphlogistic, stimulant, alterant and modifier of nasal secretion. He enumerates the different affections in which he finds it of much value. (*The Laryngoscope,* Vol. XII, p. 372).

A Russian observer, Dr. V. Ph. Gortaloff, reports on its successful use in the treatment of trachoma. He applies a 1 per cent. solution on a small cotton swab. (*Phila. Med. Journ.,* Vol. 9, p. 319).

Ichthoform (a compound of Ichthyol and Formaldehyde) has been practically unheard of in the current medical literature of the past year.

Ichthyol (Ammonium Ichthyol-Sulphonate) is still a very important and largely used agent in the hands of the dermatologist.

Mr. David Harley read a "Note on Ichthyol" before the Edinburgh Chemists', Assistants', and Apprentices' Association on Wednesday, January 15th last, enumerating compactly the different forms in which it can be administered with effect. (*Pharm. Journ.,* Fourth Series, Vol. XIV, p. 63).

In alluding to this paper Mr. F. A. Upsher Smith reports the results of a few simple experiments carried on by him with the object of finding out whether Ichthyol was easily dispensed in the form of mixtures. The final "conclusion to be drawn from these experiments is that ichthyol should only be prescribed in neutral aqueous solutions, which keep well for many months, whereas ichthyol is decomposed in acid or alkaline solution." (*Pharm. Journ.,* Fourth Series, Vol. XIV, p. 86).

Dr. Charles T. Spangler of Kane, Penn. read a paper on "Ichthyol in Tuberculosis" before the Philadelphia County Medical Society in December last and enumerated eight cases. (*Therapeutic Monthly,* Vol. I, p. 294).

Dr. J. D. Astrachan of Moscow, Russia also reports favorable results with this agent in the treatment of some twenty-one cases of pulmonary tuberculosis of which ten had been suffering from four to five years, four from five to seven years and one for only thirteen hours. He claims that the dose should not exceed 4 grammes (61.7 grains) daily, divided into three doses one being taken after each meal—gradually increasing from small doses up to the maximum. He gives in illustration the details of three

of his cases. (*Allg. Med. Central-Zeitung,* Vol. 71, pages 206 and 219).

Prof. Errico DeRenzi of Naples, Italy is a believer in the open-air, dietary and rest treatment for tuberculosis, but does not completely disregard medicinal treatment, and he enumerates the agents which have given him the most satisfaction as being Ichthyol, Ichthoform and Sodium Salicylate. His plan is to administer Ichthyol in large doses and over a long period of time, and he prefers either one of the following fluid prescriptions:

Ichthyol.	25	grammes	(385.8 grains)
Distilled Water.	60	"	(about 2 ounces)
Alcohol.	60	"	(" 2 ")
Syrup of Lemon.	50	"	(" $1\frac{3}{4}$ ounces)
" " Orange Peel.	50	"	(" $1\frac{3}{4}$ ")

or

Ichthyol.	25	grammes	(385.8 grains)
Simple Elixir.	160	"	(about $5\frac{1}{2}$ ounces)
Distilled Water.	60	"	(" 2 ")

or

Ichthyol.	10	grammes	(154.3 grains)
Peppermint Water.	80	"	(about $2\frac{3}{4}$ ounces)
Simple Syrup.	20	"	(308.6 grains)

The dose is one teaspoonful in a glassful of water several times a day, gradually increasing up to ten teaspoonfuls a day. He finally urges others to make use of this agent and report their results. (*Berlin. klin. Wochensch.,* Vol. XXXIX, p. 397).

Dr. Polacco of Milan, Italy reports on the "Treatment of Typhoid Fever by Ichthyol Baths" made by adding 60 grammes (about 2 ounces) of Ichthyol to a bath-tub full of water at a temperature of 28°C. (82.4°F.). Each bath should last from 10 to 15 minutes and the temperature gradually lowered to 24°C. or 22°C. (75.2°F. or 71.6°F.) It does not necessarily follow that his favorable results were due to the Ichthyol, for some would attribute the results to the water treatment. (*Bull. Gén. de Thérap.,* second half of Vol. for 1901, p. 877).

Dr. Menahem Hodara of Constantinople, Turkey reports his favorable results in his dermatological practice. The affections in which he has applied it in the form of a thick ointment are furunculosis, impetigo contagiosa, folliculitis of the scalp, impetiginous

eczema, herpes genitalis and sycosis barbae. (*Monats. für Prakt. Dermatol.,* Vol. XXXII, p. 604).

Dr. Arthur Ernest Taylor of Cardiff, England also reports on the use of "Ichthyol in Skin Diseases." After speaking highly of its use he enumerates some typical cases. (*The Hospital,* Vol. XXXI, p. 337).

Dr. Eschle of Baden-Baden, Germany reports on its use in erysipelas. He applies the Ichthyol undiluted by means of a thin layer of wadding. If necessary the application is repeated on the third day, but the wadding is allowed to dry and drop off of its own accord. (*Die Heilkunde,* Vol. V, p. 297).

Dr. Popov a Russian observer, recommends a 10 to 20 per cent. solution of Ichthyol in the treatment of conjunctivitis. (*La Sem. Méd.,* Vol. 22, p. 88).

An aqueous solution of Ichthyol and Eosin has been given the contracted name of "Ichthosin", and it has been employed by Dr. Hugo Goldschmidt in the proportion of 5 drops of this solution to 10 grammes (154.3 grains) of a simple ointment or paste. This aqueous solution is of the color of the human flesh, and the eosin may be added in varying quantities to produce any shade of flesh color. No other reports have been noted as yet.

A report has recently come from Japan that Ichthyol has now been separated into two compounds, thus proving it to be a mixture.

Igazol—a combination of Formaldehyde, Tri-Oxy-Methylene (Paraform) and Iodine—is still employed, but confined to the old country. Some references as to its use were recorded here last year under the head of Formaldehyde.

Dr. Max Wolff of Berlin, Germany has carried on a "Demonstration of Preparations from Animals Infested with Tuberculosis and Treated with Hetol and Igazol", with rather unfavorable results, as the animals showed severe pulmonary congestion and even pneumonia by the inhalations. The amount inhaled at the beginning was 2 grammes (30.9 grains) which was gradually increased to 10 grammes (154.3 grains) every three or four days. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 457).

Dr. Isidor Preisach of Buda Pesth, Hungary has carried on a series of experiments in "The Treatment of Pulmonary Tuberculosis with Igazol." His method was to place three patients together in a room in which these fumes were liberated. He employed

4 grammes (61.7 grains) of this agent daily. The results which followed were an improvement in the appetite and sleep, decrease in the cough and expectoration, but the fever and the number of bacilli in the expectoration were uninfluenced. (*Ungarische med. Presse,* Vol. VI, p. 490).

Iodine is only alluded to here to record two items of interest.

Dr. A. Cavazzani of Pisa, Italy reported at a meeting of the Italian Congress of Internal Medicine held at Pisa on October 27th last that he had "cured" patients who had been suffering with pulmonary tuberculosis for several years previous, by treating them with nascent Iodine. He had previously experimented on animals and then introduced the treatment in his clinic. This report is made after a ten years' experience, and the only drawback he can see to this method of treatment, is that it requires many months and even a year at times before complete results are obtained. Some of his earlier patients have now remained in their restored condition for some six years. (*Gaz. degli Osped. e delle Cliniche,* Vol. XXII, p. 1380).

A new combination of Iodine with white of egg has been named "Iodogenol." This combination has been reported by Drs. Pépin and Leboucq of Falaise, France. The proportion of Iodine is found to be 13.45 per cent. It is reported to be a stable compound and almost tasteless. It is thus liberated slowly and produces no ill-effects in the alimentary tract even after a prolonged administration for seven weeks. (*Bull. Gén. de Thérap.,* Vol. CXLII, p. 62).

Iodipin (the combination of iodine with the fatty acids in oil of sesame) is still being used considerably.

Dr. Arthur Meyer of Nervi, Italy made use of this agent in the treatment of goitre, having been led up to it by its being recommended in the treatment of sclerosis of the middle ear. The particular patient alluded to not only suffered from the ear affection but had an enlarged thyroid gland. After the administration of a ten per cent. solution of Iodipin in teaspoonful doses three times a day no amelioration resulted in the ear affection but the goitre rapidly diminished and finally disappeared altogether. This favorable result followed also in a second case. (*Deut. Aerzte-Zeitung,* Vol. for 1901, p. 315).

Dr. Blanck of Potsdam, Prussia has collected together the experiments of others and his own and makes a report. (*Die Med. Woche,* Vol. for 1901, pages 520 and 531).

Dr. Kreibich of Vienna, Austria reported on January 17th last at a meeting of Gesellschaft der Aerzte in Vienna on the use of local injections of Iodipin in a 21 year old woman suffering from actinomycosis of the cheek. (*Wien. klin. Wochensch.,* Vol. 52, p. 191).

Iodocol (a combination of Iodine and Guaiacol) has been practically unheard of in the current medical literature of the past year.

Iodoform still holds its own very effectively notwithstanding the repeated presentation to the profession of claimed substitutes.

One of the latest is bone-charcoal, on the use of which Dr. Artur Frommer of Cracow, Poland reports with little encouragement. He used it in a series of cases of bone and joint tuberculosis and suppurating lymph-nodes, in the form of a sterilized glycerin emulsion. He injected a 10 per cent. solution of this emulsion which apparently was uniformly followed by painful swelling of the joint, very evident rise in temperature and at times acute abscesses. There was some slight evidence of its value in the after-treatment of atypical resected joints and excised lymph-nodes, but he did not observe sufficient benefit to encourage him much. (*Deut. Med. Wochensch.,* Vol. XXVIII, p. 203).

It would be quite impracticable to record here every mention which has been made of Iodoform during the past year, but one comment of Dr. Solomon Solis-Cohen and his colleagues Drs. H. C. Wood, Jr. and L. F. Appleman may be of service and encouragement to some. They state: "One of the few drugs of proved value as an aid to hygienic treatment in pulmonary tuberculosis is Iodoform." .....
After describing the cases where it is of particular value they conclude: "No one who has learned how to give iodoform and who has had the courage to persist in its use for a year in each of, say six, cases of the type described, is likely thereafter to abandon it in favor of any of the transient fads of the day." (*Amer. Medicine,* Vol. IV, p. 117).

Dr. I. S. Stone of Washington, D. C., on the other hand, calls attention to "Iodoform and Carbolic Acid Intoxication" in that he has observed that certain patients have a peculiar susceptibility to these agents and therefore they should be used with caution. He relates 4 cases and concludes that Iodoform should be discarded by obstetricians, gynecologists and abdominal surgeons. (*Amer. Journ. of Obstet.,* Vol. XLV, p. 93).

Iodoline is another new substitute for Iodoform, and is simply a compound of Iodol (Tetra-Iodo-Pyrrol)—previously known as an Iodoform substitute—and Albumen. It appears in two forms but is a yellow powder insoluble in water and alcohol. One form contains from 9 to 10 per cent. of Iodol and is intended for internal use. The other form contains 36 per cent. of Iodol and is intended for external use. This compounded name is an unfortunate one because of the confusion that may arise between it and another new substitute—the next article commented upon.

Dr. Arth. Jordan of Moscow, Russia has made use of it as a substitute for the Iodides as well as for Iodoform, in the treatment of tertiary and malignant syphilis. His mode of administration is to give it in water or milk six to ten times daily in 2 gramme (30.9 grains) doses. This represents 1 to 2 grammes (15.4 to 30.9 grains) of Iodine daily. He claims that the main advantage in this combination is the evident improvement noticed in the general condition of the patients. He has found it of value externally in gummata, syphilides and soft chancre. In these latter he believes it is a very effective substitute for Iodoform. (*Monats. für Prakt. Dermat.,* Vol. XXXIII, p. 610).

Iodylin is the name given to another new substitute for Iodoform which appears to be chemically Bismuth-Iodo-Salicylate.

Dr. Eugen Israel of Berlin, Germany reports the result of his trials with this agent in an article entitled "On Iodylin as a substitute for Iodoform." He reports on its use in two different forms of application, one a dusting powder and the other a gauze saturated with $7\frac{1}{2}$ per cent. of Iodylin. He has not yet had quite enough experience to speak decidedly on its usefulness in tuberculosis but has received sufficient encouragement to advise further trial. (*Med. Woche,* Vol. for 1902, p. 139).

Iodyloform is another substitute for Iodoform, being a combination of Iodine with Gelatin in the form of a powder representing 10 per cent. of the former, which has been in use for some little time but not yet very prominently before the profession.

Dr. G. J. Müller of Berlin, Germany now reports on his experience with it for the past two and a half years, stating that he has completely discarded Iodoform. He found it specially convenient and effective in virulent buboes and believes that if it is successful in such cases it can be recorded as successful in all other similar cases. (*Allgem. Med. Central-Zeitung,* Vol. 71, p. 443).

Itrol (Silver Citrate) has apparently not yet passed out of the attention of the profession, as would have appeared a year ago.

In reporting "On the Comparative Value of the Various Preparations of Silver in Ophthalmic Work" Mr. Gustavus Hartridge, an English surgeon, states that the results he has obtained in a few cases in which he has tried Itrol, lead him to think that it is an excellent antiseptic with considerable penetrating power. He used it chiefly in suppurative conditions of the conjunctiva, the cornea and the lachrymal apparatus. (*Brit. Med. Journ.,* Vol. II for 1901, p. 1332).

Dr. F. R. von Arlt of Gratz, Austria reports his experience in the use of this agent in the treatment of trachoma, along with another agent called "Cuprocitrol" (apparently little known in the medical literature of the day). He gives the details of the effects in full and claims 88.5 per cent. of recoveries. (*Wien. klin. Wochensch.,* Vol. XV, p. 472).

Izal is the patented derivative and antiseptic alluded to here several years ago. It is a white emulsion of oxidized hydrocarbons obtained by the distillation of coal oil by a patented process employed in the manufacture of a special form of coke. It is claimed to contain 30 per cent. of the so-called Izal Oil. It has been extolled ever since its introduction, several years ago, as an effective non-toxic disinfectant and antiseptic. Its composition is largely that of the cresols as there is apparently very little phenol present. The claims for it have been constant in certain quarters of Europe, but little has been heard of it in this country. In reporting here in 1896, the most prominent observer was Dr. F. W. Tunnicliffe of London, England. He apparently has continued his observations and now summarizes his experience with it. After giving in detail some of his observations he closes as follows: "Summarising the foregoing results it may be said that so long as the individual differences in cases of phthisis remain so manifold, so long must we greet any addition to our non-irritating antiseptics with thankfulness. Of the efficacy of carbonate of guaiacol in certain cases nobody with any experience of it can have any reasonable doubt. The expense, however, of a prolonged treatment with this drug in many cases absolutely contra-indicates it. It spite of many requests from the profession the makers have been unable to reduce materially its price. Some few years ago, in conjunction with Dr. T. H. Arnold Chaplin, the author introduced guaiacolate of piperidine

in phthisis, but this, although possessing certain advantages, is also necessarily relatively expensive. In izal we appear to have a cheap and efficacious drug. The best results are to be obtained with it in cases of active pulmonary tuberculosis and of old cavities with abundant fœtid expectoration. According to my experience it seems to exert a beneficial influence in cases in which diarrhœa is present, whether this be due merely to decomposition of the intestinal contents or to actual tuberculous lesion of the intestine. In those cases in which the bronchitic element is well marked it is, as was *a priori* to be expected, less useful." (London *Lancet,* Vol. I for 1902, p. 146).

Another English observer, Dr. M. H. Gordon, now reports "Some Experiments to Determine the Actual Efficacy of Izal Oil as an Intestinal Disinfectant." He believes the success of Izal as a remedy for diarrhea and for dysentery is a clinical fact. "Whether by means of this or another intestinal germicide it will ever be possible to control typhoid fever, appendicitis, etc., at the site of infection is a matter for the future to determine." (London *Lancet,* Vol. I for 1902, p. 656).

Jambul (Jamun)—the seeds and bark of the Eugenia Jambolana—has been rather quiescent during the past few years although it has continued in existence and used in some quarters.

Dr. William Mackie of Elgin, Scotland now states: "As doubt has been cast on the value of jambul in diabetes mellitus, the following case, which shows its power in reducing the amount of sugar excreted, may be of some interest:

The patient was a man, aged 40, who to my knowledge had suffered from diabetes for at least three and a half years." After relating the details of his case Dr. Mackie remarks that his patient made no complaint regarding the action of the drug except that in the larger doses it slightly increased the constipation. (*Brit. Med. Journ.,* Vol. II for 1901, p. 618).

Largin (the silver compound with albumin, containing 11.2 per cent. of silver) has been little heard of in the current medical literature of the past year. However in reporting "On the Comparative Value of the Various Preparations of Silver in Ophthalmic Work", Mr. Gustavus Hartridge of London, England states that in purulent ophthalmia he has found it somewhat uncertain. In a few cases it seemed to have a very marked effect in cutting short the attack and controlling the inflammation; in others the results

have been disappointing, and I have arrived at the conclusion that in this disease it is distinctly inferior to protargol. In trachoma it has a distinct beneficial effect in diminishing the amount of secretion and shortening the acute attacks; it may also be usefully employed after the operation of squeezing out the granulation with the roller forceps; in lachrymal cases, where there is regurgitation of pus or muco-pus from the lachrymal sac. After the canaliculus has been slit up, the sac and nasal duct may be syringed out with a 10 per cent. solution. He has had better results in these troublesome cases with Largin than with any other agent, and for its good effects in these cases alone the remedy is worthy of a permanent place among our list of remedies. (*Brit. Med. Journ.,* Vol. II for 1901, p. 1332).

Liquid Air has been given very little attention in the current medical literature of the year. It has however been used as a local anæsthetic to a limited extent, but it does not meet the requirements as satisfactorily as a spray of the well-known anæsthetics.

Dr. C. M. Belli of Padua, Italy has been carrying on some experiments in preventing and decreasing germ reproduction, by the cold produced by the evaporation of Liquid Air. His results were fairly satisfactory but it was quite definitely proved that the bacteria actually occurring in living animal tissue if of the virulent type was not destroyed. (*La Riforma Medica,* Vol. XVIII, p. 219).

Lysoform (a combination of Lysol and Formaldehyde) is still before the profession, and is claimed as a valuable disinfectant by many surgeons.

Dr. Cramer of Heidelberg, Germany has been experimenting with Bacillol and Lysoform. The odor of Bacillol is less disagreeable, and as weak a solution as 1 per cent. is effective in destroying germs. It is also cheaper than Lysoform. He would class Lysoform rather as a deodorant and cosmetic than an efficient antiseptic. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1595).

Dr. M. Vertun of Berlin, Germany "Remarks on the Article of Dr. Cramer 'Bacillol and Lysoform,' two new Disinfectants." He takes issue with him in that he would defend Lysoform, and his article will be of interest to those who have had a chance to compare the two agents. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1844).

Dr. Fritz Hammer of Würzburg, Bavaria utters a warning against

the use of this agent in obstetrical practice. (*Centralbl. für Gynäkol.*, Vol. 26, p. 441).

Lysol (the saponified product of coal-tar, chiefly composed of cresols)—the substitute offered for Carbolic Acid—does not seem to be any more of a favorite than last year. Unfortunately the poisoning cases have accumulated somewhat.

Dr. Georg Burgl of Nuremberg, Bavaria relates two cases where it had been taken by a child in mistake. He also enumerates eighteen cases of intoxication on record in the literature of the year. (*Muench. Med. Wochensch.*, Vol. XLVIII, p. 1524).

Dr. Karl Assfalg of Bayreuth, Bavaria also reports a case of poisoning in a two year old child who drank probably about a teaspoonful and died nineteen hours later. Unfortunately no post-mortem could be obtained. (*Therap. Monats.*, Vol. XVI, p. 49).

Lysulphol is the name given to a compound of sulphur, lysol and soap, containing at least 10 per cent. of sulphur. It is described as being rather a thick, black semi-fluid, readily soluble in water.

Dr. E. Rumpf of "Friedrichsheim" recommends its use, diluted at times with glycerin, in the treatment of pityriasis versicolor, scabies, acne, in various desquamatory conditions, often in cases of psoriasis of long standing and of prurigo. The mode of application is to rub the ointment-like fluid on every evening and wash it off in the morning. (*Therap. Monats.*, Vol. XV, p. 588).

Menthol (obtained from the oil of peppermint) is only mentioned here for the purpose of calling attention to an article by Dr. W. A. Briggs of Sacramento, Cal. entitled "Mentholization of the Mucosa of Air Passages" as it may be of service to some. It is therefore quoted in full: "*To the Editor of American Medicine:*—Mentholization of the mucosa of the air passages before, during and after etherization has given me such satisfaction as to impel me to submit the method to the profession at large. The method is as follows: Sprinkle a dram of oil of peppermint or of saturated alcoholic solution of menthol in the cone; let the patient inhale of this freely for three minutes, then saturate the cone with ether and bring it down slowly over the face; after a few full inhalations crowd the cone down well and push the etherization as rapidly as is consistent with safety; continue the use of the mentholized cone through the whole period of anæsthesia, replenishing the ether as usual. After the operation let the patient inhale oil of peppermint

or menthol from a handkerchief freely and often until the tendency to nausea subsides.

The advantages of this over the usual method are the following:

1. Entire freedom from cough and sense of impending suffocation and comparative freedom from nausea, vomiting, and retching.

2. Ease and rapidity with which anesthesia may be induced and the ease and smoothness with which it may be maintained.

3. The entire absence or marked abbreviation of the period of excitement.

4. Economy both of ether and of time.

5. Profounder first anesthesia, under which minor operations may be done with more certainty.

6. Probably less postoperative nausea and vomiting."

(*Amer. Medicine,* Vol. III, p. 680).

Menthol and Formaldehyde have recently been brought together in the presence of hydrochloric acid gas to obtain a product which chemically is Chlor-Methyl Ester of Menthol. It is described as a colorless oily liquid, rapidly decomposing into the three component parts when added to water. It is claimed that it acts effectively in the form of a spray in treating affections of the respiratory tract. The theoretical explanation of its action is that the hydrochloric acid remains in the water and the Menthol and formaldehyde are set free, on contact with the mucous membrane. No clinical reports have yet been printed in the current medical literature.

Mercurol (the compound consisting of yeast nuclein and metallic mercury) has not been much heard of individually in the current medical literature of the past year. It has to be sure been mentioned incidentally where the different agents used for mercury treatment have been enumerated. For instance Dr. Winfield Ayres of New York City when writing on "The Treatment of Syphilis, with Special Reference to the Best Methods of Administering Mercury" after mentioning his preference for mercury ointment, states that he prefers Mercurol next. (London *Lancet,* Vol. II for 1901, p. 1037).

Methyl Salicylate (Synthetical Oil of Wintergreen) is still being discussed as to whether it is a justifiable substitute for the true Oil of Wintergreen, but apparently no definite conclusions have yet been arrived at. It would be a great advantage to all concerned if some definite clinical experiments were attempted to

settle this point, for the synthetic product is much more reasonable in price, and when chemically considered should be equivalent to the true oil.

The odor of this Oil is objected to by some patients and Oil of Lavender has been suggested as a mask in the proportion of 1½ to 2 per cent.

Methylene Blue (Tetra-Methyl-Thionine Chloride)—the anilin derivative—has lost none of its prominence during the past year.

Drs. J. Castaigne and X. Bender of Paris, France have taken pains to collect together the results of the experimental work by various authorities with this agent in the treatment of kidney affections. (*Gaz. des Hôpitaux,* Vol. 74, p. 858).

Dr. Karl Assfalg of Berlin, Germany now publishes the result of his extended study on "The Use of Methylene Blue to Test the Function of the Kidney." His cases were 40 in number and of various kinds, and he would conclude that the extravagant promises made by some as to its usefulness have not been fulfilled, but he agrees that it has some substantial value. (*Zeitschrift für klin. Med.,* Vol. XLIV, p. 226).

Drs. D. E. Hughes and Elizabeth Lovelace of Philadelphia, Penn. have reported on "The Use of Methylene Blue as a Sedative." They relate 22 cases and follow with a general summary. Even from this limited number of cases they believe this agent is entitled to not only further study but "a place in the ever-growing class of sedatives." (*Phila. Med. Journ.,* Vol. 9, p. 532).

Dr. A. De-Blasi an Italian observer, reports on his use of this agent in 100 cases of malaria, with favorable results in 62. His dose varied from 200 milligrammes to 2 grammes (3.1 to 30.9 grains) within 24 hours—best given after eating. He cautions against giving it to patients in the last two months of pregnancy as it apparently induces painful contractions. (*Gaz. degli Osped. e delle Cliniche,* Vol. XXIII, p. 279).

Dr. Cornelius R. Lane of Brooklyn, N. Y. reports two cases of pulmonary tuberculosis which he treated with Methylene Blue. Both cases improved very rapidly on 65 milligramme (1 grain) doses given three times a day. He had previously found little mention of its use in tuberculosis except by Dr. Althen of Wiesbaden, Germany (*Muench. Med. Wochensch.,* Vol. XXXIX, p. 7). He confirmed his diagnosis of pulmonary tuberculosis by a sputum

examination of the last case by the New York Board of Health. He concludes as follows: "My faith in methylene blue is strengthened by finding it is eliminated in the bronchial mucus, the cellular elements and some of the bacteria in the sputum being stained blue." (*Amer. Medicine,* Vol. II, p. 360).

Dr. Bonnet of Massiac, France reported at a meeting of the Paris Academy of Medicine on October 8th last his results in the treatment of five cases of ozena with Methylene Blue. His plan was to irrigate the nasal cavities daily with this agent in the proportion of 2.5 grammes (38.6 grains) of Methylene Blue to the litre (about a quart) of water. The irrigations were repeated three times a day at first, and a complete cure was obtained in three or four weeks. The only drawback to this method is the slight one of staining the nostrils and other parts with which it comes in contact. (*Bull. de l'Acad. de Med.,* Vol. XLVI, p. 301).

Dr. A. Siredey reported at a meeting of the Paris Medical Society of Hospitals on November 8th last that he had successfully treated a case of ulcero-membranous stomatitis with this agent. He applied it in the form of a powder on cotton wrapped on the end of a stick. Six such applications produced complete cure at the end of eight days. (*Bull. de la Soc. Med. des Hop. de Paris,* Vol. 18, p. 1109).

Dr. H. Gaudier of Lille, France reports excellent results in the treatment of some cases of chronic forms of otitis media by introducing a warm 2 per cent. solution of this agent into the auditory canal. He describes his technique and cautions one to procure a pure medicinal grade of Methylene Blue as in his experience the usual market product of France is contaminated with arsenic and zinc. (*La Sem. Méd.,* Vol. 21, p. 344).

Dr. Ch. Mantoux of Paris, France writes on "Methylene Blue" and speaks of its present more continuous use in gynecology and dermatology. He alludes to Siredey's report as to its good results (mentioned above). (*La Presse Medicale,* first half of 1902, p. 211).

Dr. P. Morgano of Catania, Sicily reports his successful and rapid "cures" with this agent in ocular infections accompanying variola and other exanthematous fevers. He employs the method of previous observers by introducing a sterilized aqueous solution of 1 to 500 into the eyes several times daily. He has used as strong a solution as 1 to 200, irrigating the eye with boric acid

previous to its introduction. He does not express surprise at his favorable results from the fact that it has been proven that a solution of 1 to 70,000 prevents the growth of Löffler's bacillus and streptococcus pyogenes. (*Journ. des Praticiens,* Vol. XVI, p. 284).

Dr. Theo. G. Davis of Bridgeton, N. J. writes on the "Value of Methylene Blue in Operating on Fistulous Tracts." His results were better than he had looked for. (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 1503).

Naphthalan (Naftalan)—the proprietary article made by dissolving 2.5 to 4 per cent. of anhydrous soap in purified petroleum naphtha—has been little commented on in the current medical literature of the past year.

Naphtalin (Naphthalene)—one of the hydrocarbons obtained from coal-tar—has received very little attention during the past year. The only prominent mention of it is by Dr. Fr. Schultze of Bonn, Rhenish Prussia. He reports a case of anthrax with extensive necrosis involving both cheek bones. A complete cure was obtained from the local application of corrosive sublimate and internal administration of 300 milligrammes (4.5 grains) of quinine every three hours, and repeated doses of 300 milligrammes (4.5 grains) of Naphtalin as an intestinal antiseptic. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 685).

Naphtol (B-Naphtol)—Naphthol the coal tar derivative—has been practically unnoticed in the current medical literature of the past year. One French observer however Dr. Legroux reports "On the Medication of Typhoid Fever in Children by Naphtol." He administers a purgative and then follows up with either of the two following formulas, depending upon the severity of the diarrhea: For a moderate diarrhea, Naphtol 2 grammes (30.9 grains) made up into ten powders, one being given every hour.

For profuse diarrhea:

Naphtol.	2 grammes	(30.9 grains)
Bismuth Salicylate.	2 "	(30.9 ")

also divided into ten powders to be taken throughout the 24 hours. (*Bull. Gén. de Thérap.,* Vol. CXLII, p. 880).

Sodium Naphtolate known under the name of "Microcidin" has been mentioned at times, but little definite clinical results are reported.

Nargol is one of the newer silver compounds. Its use has been

definitely described by Mr. Gustavus Hartridge of London, England in writing "On the Comparative Value of the Various Preparations of Silver in Ophthalmic Work." He alludes to it as follows:

"*Nargol* is a chemical compound of silver and nucleic acid containing 10 per cent. of silver; it is readily soluble in water, very stable, and is said to possess most of the properties of protargol; it may be used in a 5 or 10 per cent. solution. Nargol is supplied as a light brown powder, forming in solution a brown fluid, which gradually becomes darker on exposure to light. Solutions of the drug cause no pain when introduced into the conjunctival sac, and is pleasanter to use and less sticky than protargol. In acute contagious ophthalmia I have used 10 per cent. solutions, and have found them efficacious, cutting short the attack and leading to a rapid cure. It also acts well in suppurative conditions of the lachrymal sac. With regard to purulent ophthalmia my experience of the drug is not sufficient to justify me in forming an opinion. The remedy certainly seems worthy of further trial." (*Brit. Med. Journ.,* Vol. II for 1901, p. 1332).

Dr. A. G. Wippern of Chicago, Ills. reports "Three Obstinate Cases of Empyema of the Maxillary Antrum, Cured with Injections of Solutions of Nargol." (*Med. News,* Vol. 79, p. 734).

Dr. Leigh Ewing Schwarz of Chicago, Ills. gives "Some Observations on the Efficacy of Nargol in Ophthalmologic Practice." In his experience he finds that in solutions of equal strength Nargol is more stable and less irritating than protargol and quite as efficient. (*Medicine,* Vol. 8, p. 211).

Nosophen (Tetra-Iodo-Phenol-Phthalein)—the Iodoform substitute—has received no more attention in the current medical literature of the past year than in the previous year.

Nutmeg (the seed of Myristica fragrans) is only mentioned here to record a case of poisoning reported by Mr. Robert A. Pitter, a practitioner in Tottenham, London, England.

"Quite recently I was called during the night to see a young woman who was stated to be 'in a fit.' I found her in a collapsed condition, muttering unintelligibly; her extremities were clammy, her pulse was hardly perceptible, and her pupils were somewhat dilated and reacted feebly to light. The symptoms were suggestive of alcoholic poisoning but her breath smelt unmistakeably of nutmeg and I then elicited that she had taken a whole nutmeg, grated, in a wineglassful of gin an hour or so previously. On asking her

friends why she had done this I was told that 'she was so afraid of having another child.' It appeared that the catamenia had been delayed two weeks and, dreading pregnancy, she had taken the advice of some female friend with the result above mentioned. I afterwards made some inquiries and learned that there is a prevailing impression among the domestic servant class that nutmeg is an emmenagogue, although such a large dose is perhaps unusual. Her general condition improving I contrived to empty her stomach of its contents. She remained in muttering delirium throughout the night and slept heavily nearly all the next day, when she awoke apparently recovered. The catamenia followed accompanied by much pain.

I should be grateful to any reader of *The Lancet* for information as to other cases in which toxic effects have been produced by this spice." (London *Lancet,* Vol. I for 1902, p. 1035).

Mr. S. Maberly Smith of Geelong, Victoria, Australia was interested to answer Mr. Pitter's request for information, and writes as follows:

"Some years ago I was called to see a woman who had taken the whole of a ground nutmeg mixed with gin. The symptoms were exactly the same as those described by Mr. Pitter and the woman nearly died. The dose was taken to procure abortion; whether it had that effect I did not learn. The friends volunteered the remark that the woman had taken the nutmeg in spite of the fact that a neighbor had nearly died from the same cause shortly before. At the time I asked a good many friends, medical and lay, if they knew anything of the poisonous properties of nutmeg in large doses. None of them did except one old lady from the north of England, who stated that she and people in her part knew them well. Squire states that nutmeg in large doses is a narcotic poison." (London *Lancet,* Vol. I for 1902, p. 1798).

Orexin (Phenyl-Di-Hydro-Quin-Azoline)—the appetite promoter and stomachic—in its basic form has not received much comment in the current medical literature of the past year. The Tannate however is still the preferable form.

Dr. Carbonell y Solés reports on the use of "Tannates in Pediatric Practice." He employs three Tannates: Creosote, Orexin and Quinine, and expresses his satisfaction in the use of the Orexin Tannate as void of disagreeable properties in its use as a stomachic. (*Archiv. of Ped.,* Vol. XVIII, p. 800).

Dr. Ludwig Pick of Vienna, Austria writes "On Orexin in the Vomiting of Pregnancy." He has treated 22 cases in his clinical practice with exceedingly satisfactory results. (*Sammlung Klin. Vorträge,* Vol. for 1902, p. 589).

Its use in the treatment of seasickness and "car-sickness" is still favored in some quarters, but not very encouraging results are reported.

Orthoform (Methyl Ester of π-Amido-*m*-Oxy-Benzoic Acid) —the synthetic local anæsthetic constituted like cocaine—has not been commented upon much during the past year except in the way of repetitions. Its internal administration has lately been attempted.

Drs. A. Einhorn and R. Heinz of Munich, Bavaria have been using it successfully in round ulcer and cancer of the stomach.

Drs. Bouveyron and Siraud of Lyons, France have successfully used it in the headache accompanying syphilis. They administered as much as 2 to 3 grammes (30.9 to 46.3 grains) a day, dividing it up into from four to six powders. They differentiate the cases and stipulate how each should be treated. (*La Sem. Méd.,* Vol. 21, p. 400).

Oxycamphor (Oxaphor)—obtained by chemically replacing one atom of hydrogen for the radical HO—has been practically unheard of in the current medical literature of the past year.

Paraldehyde is only mentioned here to call attention to the warning expressed by Dr. Brissemoret, a French observer, as to its incompatibility with potassium bromide. He has found that the bromide is converted into bromate when the following prescription is used:

Potassium Bromide. .	3	grammes	(46.3 grains)
Paraldehyde.	4	"	(61.7 ")
Distilled Water. 150		"	(about 5 fluidounces)

He states that this combination is frequently prescribed, at least in France, and that the full results are not obtained on account of the incompatibility. (*Journ. des Praticiens,* Vol. XVI, p. 41).

Pharmacopœias of the various countries have been spurred on to revision and thus brought up to modern times, by the completed Edition of the British Book, and by the well-known work now going on to revise the United States Standard.

As a matter of historical interest it may be worth reading to

learn that at a meeting of the British Chemists' Assistants' Association on April 17th last a "Mr. Franklin communicated a note dealing with the pharmacy of the second edition of the 'Pharmacopœia Bateana,' including the Arcana Goddardiana—published A.D. 1691, an extremely rare volume, which illustrated in a remarkable degree the advance of pharmacy. The formulæ in this compilation were published by Mr. James Shipton, an apothecary of London, and were said to have been prescribed by Dr. George Bate, a celebrated physician who flourished in the reign of King Charles II. According to Gray, "The 'Pharmacopœia Bateana' has been a work of frequent reference from the time of its first appearance to the present day." Mr. Franklin remarked that one of the most striking features of the book was the extensive use made of the old alchemical symbols,....." (*Pharm. Journ.,* Vol. XIV, Fourth Series, p. 357).

The new Swedish Pharmacopœia, work on which has been going on for some seven years, has now been issued.

The Swiss Standard is now progressing to completion after occupying three years' work.

The new Edition of the Italian Pharmacopœia is not promised at any definite date although work is now going on.

Denmark is also preparing her standard authority.

It is announced that a new Croatian Pharmacopœia is on sale in England and closely follows the British Pharmacopœia.

An Austrian and a Dutch Revision are in progress.

The French Revision has been much delayed and no definite date is fixed for its publication.

An International Convention for the unification of the formulas of heroic medicines was held at Brussels last September, and representatives from most countries were present. It is to be hoped that some good results will follow the work of this Convention, but practical difficulties have heretofore been serious obstacles in accomplishing any desirable results.

Phenacetin (Para-Acet-Phenetidin) is only alluded to here in order to mention a new compound prepared by the action of Brom-Aceto-Phenone on the Sodium Compound of Phenacetin itself. It has been given the contracted name of Phenacyl-phenacetin. This is too recently offered to expect any clinical results to be recorded.

Phenocoll (Amido-Para-Acet-Phenetidin)—the antipyretic—

has not been individually commented upon in the current medical literature of the year although still a prominent agent in use.

Phenosalyl is the name which has been given to a combination of the following products and proportions:

Carbolic Acid	9 grammes	(138.9	grains)
Salicylic "	1 "	(15.4	")
Lactic "	2 "	(30.9	")
Menthol	0.1 "	(1.5	")

It has apparently been reported upon by only one observer, Dr. F. I. Tshitsherin, a Russian observer, in an article on the "Treatment of Varicose Ulcers and Ulcerated Gumma by Phenosalyl." He reports excellent results even in some cases which have resisted medication for several years. The applications were in the form of 10 to 30 per cent. solutions, and complete results were reached in two or three weeks. This combination proved to be superior in germicidal properties to any one of the ingredients individually, and far less toxic than others usually used. (*La Méd. Moderne,* Vol. 13, p. 57).

Piperazin (Di-Ethylene-Di-Amine) has been little commented upon in the way of new matter in the current medical literature of the past year.

Protargol (the silver compound consisting of 8.3 per cent. of Silver combined with Protein) continues to be a prominent agent, particularly in ophthalmological practice.

Dr. T. Piotrowski of Cracow, Austrian Galicia reports on "The Use of Protargol to Prevent Ophthalmia in the Newborn." He first cleanses the eyelids with a 3 per cent. solution of boric acid and then uses a 10 per cent. solution of Protargol, applied immediately to the conjunctival sac. His results are particularly favorable for he reports not one case of blennorrhea resulting from his whole series of 1030 cases. He did however have secondary catarrh in 1.2 per cent., but this he regards as extremely low. He noticed that the catarrh was increased when stronger solutions were used. (*Centralbl. für Gynäkol.,* Vol. 25, p. 885).

In writing "On the Comparative Value of the Various Preparations of Silver in Ophthalmic Work" Mr. Gustavus Hartridge of London, England gives the result of his experience as follows: "Protargol is pleasant to use, has no caustic action, and causes little or no pain; it may be applied either as drops or brushed over

the mucous membrane by means of a camel's hair brush or a cotton wool swab. When I first commenced the use of protargol I began with solutions of 2, 5, and 10 per cent., but I soon found that much better results were obtained with 10, 20, and 30 per cent. solutions; now in cases of purulent conjunctivitis I swab over the conjunctiva twice in twenty-four hours with a 30 per cent. solution, and even when the cornea is implicated this is no contraindication, the secretion quickly diminishes, the swelling of the lids goes down, and the case rapidly gets well. The good effects appear to be due to the double effect of the drug, first and foremost its germicidal action penetrating deeply into the tissue and so exerting its destructive influence on many of the bacilli which would otherwise escape, and secondly its astringent effect upon the conjunctival vessels. In acute contagious epidemic conjunctivitis due to the Weeks bacillus —an affection that was very prevalent last spring—I have found the drug give excellent results, curing the cases quickly. In trachoma, when the drug has been used in strong solution (50 per cent.), the secretion is soon diminished and the duration of the case shortened. In chronic conjunctivitis and blepharitis the drug in my hands has proved inferior to the zinc salts and mercurial ointment commonly used. In suppurative affections of the lachrymal apparatus the drug is especially useful after the canaliculus has been slit up. The sac and nasal duct may be syringed out first with a 5 per cent. solution of protargol, and if this is well borne the strength of the solution should be increased to 10 per cent. I have also used the drug in a few cases of abscess and infected ulcers of the cornea, but I have always found this treatment much less efficacious and more uncertain than the electric cautery." (*Brit. Med. Journ.,* Vol. II for 1901, p. 1332).

Dr. J. Lawton Hiers of Savannah, Ga. writes on "Protargol: Its Efficacy in Ophthalmia Neonatorum and Trachoma." The strength of his solutions varied from 4 to 20 per cent., depending upon the condition of each case. (*Georgia Journ. of Med. and Surg.*. Vol. X, p. 1).

Dr. Kesjakoff of Sophia, Russia reports a series of cases in which he used this agent with much satisfaction in the local treatment of gonorrhea. The gonococcus disappeared after one week in 12 per cent. of his cases; after two weeks in 18 per cent.; after three weeks in 30 per cent.; after four weeks in 20 per cent.; after five weeks in 14 per cent.; after six weeks in 6 per cent. These results

appeared to accord with previous observers. (*Wien. klin. Rundschau,* Vol. XV, p. 827).

Dr. Jesionek of Munich, Bavaria reports quite varied results in the treatment of gonorrhea with this agent. He discovered that his solutions did not keep well and poor results followed. He now gives in detail how he prepares the injections, and states that the solutions must always be freshly made. He has found that a strength of from ½ to 2 per cent. is quite sufficient when using it in the male patient, but that as high as 10 per cent. is called for when applied to the cervix. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1779).

Dr. Abraham L. Wolbarst of New York City publishes his "Observations in the Diagnosis and Treatment of Acute Gonorrhea, with Special Reference to the Value of Protargol as a Therapeutic Agent" in over 1100 dispensary cases in which he used a 1 per cent. solution. (*Journ. Cutan. and Genito-Urinary Diseases,* Vol. XIX, p. 556).

Dr. Thomas von Marschalkó of Klausenburg, Austro-Hungary discusses the question "Is Gonorrhea Curable in Prostitutes?" (*Berlin. klin. Wochensch.,* Vol. XXXIX, p. 330).

Veterinary Surgeon W. E. A. Wyman of Portland, Mich. reports at some length on "Protargol in Veterinary Surgery." (*Journ. of Compar. Med. and Vet. Archives,* Vol. XXIII, p. 269).

Pyoktanin (Methyl-Violet)—the analin dye "pus destroyer"—has been little mentioned in the current medical literature of the year, and it is only alluded to here again to put on record the report of Dr. E. Loustverk, a Russian practitioner, on "Pyoktanin Blue in Ascites of Cardiac or Renal Origin." He claims that whatever good results there are following the use of this agent they are due to its diuretic and diaphoretic action. (*La Sem. Méd.,* Vol. 22, p. 96).

Pyramidon (Di-Methyl-Amido-Antipyrin)—the substitute for antipyrin—has been little mentioned in the current medical literature of the past year.

Dr. L. Bertherand of Paris, France, however, has continued to study its therapeutic action, and since alluding to his observations on the Camphorate here last year, he draws further conclusions based on the use of not only the Camphorate but the Salicylate. He still believes it a valuable substitute for antipyrin on account

of its excellent analgesic and antipyretic effects. (*Bull. Gén. de Thérap.,* Vol. CXLII, p. 276).

Pyrogallol (Pyrogallic Acid) has not been much alluded to during the past year except in the way of repetitions. Two prominent observers however have reported.

Dr. P. G. Unna of Hamburg, Germany reports on "The Local Treatment of Leprosy", employing this agent. He begins with the following ointment:

Pyrogallol.	2.0	grammes	(30.9 grains)
Acid Salicylic. ..	1.0	"	(15.4 ")
Vaselin up to...	100.0	"	(about 3½ ounces)

and increases the proportions up to the following:

Pyrogallol.	10.0	grammes	(154.3 grains)
Acid Salicylic. ..	5.0	"	(77.2 ")
Vaselin up to...	100.0	"	(about 3½ ounces)

(*Therap. der Gegenwart,* Vol. IV, p. 292).

Dr. Paul Rusch of Innsbruck, Austria reports "A Case of Severe Pyrogallol Poisoning" in a woman 37 years of age and seven months pregnant. A 10 per cent. ointment of this agent had been used in treating her psoriasis. The symptoms appeared after the fourth application. (*Wien. klin. Wochensch.,* Vol. XIV, p. 1296).

Resinol (the secret proprietary agent alluded to here last year) has not been mentioned individually in the prominent medical literature of the past year.

Resorcin (officinal) continues to be largely used by the medical profession, but has been rarely alluded to individually in the current medical literature of the past year.

An English surgeon, Mr. C. Percival Crouch of Weston-super-Mare, England states that it is desirable to record some of the ill-effects he has noticed following the use of this agent in comparatively small doses. He had previously regarded Resorcin as a safe remedy and had followed the practice of many other physicians in giving it often in the treatment of intestinal troubles of infants and young children, but he now finds that it acts unfavorably on the kidneys. (*Brit. Med. Journ.,* Vol. II for 1901, p. 1266).

Dr. A. Caillé of New York City reports a case of Resorcin poison-

ing in an infant five days old. The unfavorable results followed immediately after the sixth dose of 16 milligrammes ($\frac{1}{4}$ of a grain) given at four hour intervals. This was administered for a dyspeptic diarrhea developed soon after birth. (*Pediatrics,* Vol. XII, p. 454).

Rheumatin is the coined name for the Salicylic Ester of Salicyl-Quinine. It is offered in the form of colorless and tasteless crystalline needles, insoluble in water but readily soluble in alcohol. It is claimed to have several advantages over quinine, particularly as to being tasteless and free from the sequalæ following continuous administration of the latter. Dr. Martin Overlach of Greiz, Germany has found that 2 grammes (30.9 grains) of this agent are equivalent to 1 gramme (15.4 grains) of quinine and advises doses of 2 grammes (30.9 grains) given once a day or more frequently. As its name would imply it is specially applicable in the treatment of acute rheumatism. He however advises suspension of its use for four days after the third day when it may be renewed with good effect. (*Therap. Monats.,* Vol. XVI, p. 203).

Dr. Pieper of Lüdinghausen, Prussia reports on its successful use in four cases of acute articular and chronic rheumatism. He gave as much as 4 grammes (61.7 grains) daily. He acknowledges that anorexia and ringing in the ears follow its use at times, but he believes that they are much modified and often not present. The one great drawback against its more general use is its cost. (*Therap. der Gegenwart,* Vol. IV, p. 239).

Roentgen Rays (X-Rays) have surely had more attention paid to them and a wider field covered in a rational way than in the past. Some observers have even written books wholly confined to this one topic. It has taken evidently five years since their introduction, to bring them down from an unsettled position into a fixed and permanent place in the medical profession. Their original field of simply diagnosing bodies of certain consistency in the human subject is now a very small part of their scope. Promising results are looked for in the treatment of some forms of malignant disease, and coupled with the light treatment cases of lupus and rodent ulcer have responded most encouragingly. The number of times that the X-Rays have been mentioned specifically in the current medical literature of the past year is quite overwhelming, and it would be impracticable to attempt to do more here than to record a few of the prominent comments in order to aid those who

may hereafter desire to look up the subject in the various lines in which they have been employed.

The medico-legal value of these Rays is prominently called to the attention of the medical profession by Dr. Carl Beck of New York City. (N. Y. *Med. Record,* Vol. 62, p. 202).

Dr. Beck has also initiated a discussion "On the Differentiation Between Inflammatory Processes and Neoplasms of the Bones by the Roentgen Rays." He has been very successful in his skiagraphs and his illustrations throughout his whole work in this line are very striking, especially in the detail. He emphasizes the fact throughout that such skiagraphic characteristics are not to be used independently as substitutes for the long-established clinical methods of diagnosis, but should be used as important adjuncts in a general way. (*Annals of Surg.,* Vol. XXXIV, p. 753).

Mr. H. H. Clutton, Surgeon to St. Thomas' Hospital, London, England writes on "The Influence of X-Rays on the Diagnosis and Treatment of Fractures." He gives a full page skiagraph of a badly united fracture of the femur. (London *Practitioner,* Vol. LXVII, p. 63).

Dr. A. Wodarz of Breslau, Prussia reports that he was enabled to diagnose a dislocation of the astragalo-navicular articulation, by means of these Rays. (*Deut. Zeit. für Chir.,* Vol. 61, p. 120).

A Canadian surgeon, Mr. Charles Graef of Vancouver, B. C. reports a case where he was enabled to differentiate between the diagnosis of two separate surgeons by means of the X-Ray. He writes under the title "The X-Ray in the Diagnosis, and Wiring in the Treatment, of Fractures." (*N. Y. Med. Journ.,* Vol. LXXV, p. 269).

Dr. J. Rudis-Jicinsky of Cedar Rapids, Iowa has presented "A Skiagraphic Study and Researches in the Direction of Obtaining Pictures Which are Both Shadow and Substance of Bone, Muscle, and Ligaments," showing the line of his study since last year. He gives two illustrations which clearly depict the points he desires to bring out. (*N. Y. Med. Journ.,* Vol. LXXV, p. 487).

Dr. Carl Beck of New York City writes "On the Treatment of Fracture of the Anatomical Neck of the Humerus by the Aid of the Roentgen Rays" and gives five striking illustrations. (*N. Y. Med. Journ.,* Vol. LXXV, p. 573).

Dr. Eugene R. Corson of Savannah, Ga. has evidently continued his studies in this line and now reports on "The X-Ray and Photo-

graphic Technique Necessary to bring out Bone Detail in the Print." He gives two excellent plates in illustration. (*Annals of Surg.,* Vol. XXXIV, p. 560).

Dr. Carl Beck of New York City now writes at some length on "The Modern Treatment of Fractures of the Lower End of the Radius, as Indicated by the Roentgen Rays." He gives some nineteen illustrative cuts. (*Med. News,* Vol. 81, p. 529).

Dr. G. G. Ross and Mr. M. I. Wilbert of Philadelphia, Penn. have made a study of "The X-Rays in Socalled Sprains." They give some twenty illustrations and conclude as follows: "These cases and illustrations, though meager, we trust are sufficient to suggest the possibilities of grave injuries and results which may be occasioned by apparently slight causes." (*Amer. Medicine,* Vol. III, p. 149).

Dr. John Hall-Edwards of Birmingham, England again records his experience in South Africa with "The Roentgen Rays in Military Surgery." (*Brit. Med. Journ.,* Vol. II for 1901, p. 471).

Dr. William R. Fox of Melbourne, Victoria Australia has studied the question of "The Localisation of Foreign Bodies by the X Rays" and in his report gives four illustrative diagrams. (London *Lancet,* Vol. II for 1901, p. 784).

Dr. William M. Sweet of Philadelphia, Penn. publishes his "Results of X-Ray Diagnosis and of Operation in Injuries from Foreign Bodies in the Eye." He gives a tabular result of some sixty-five cases, and draws six conclusions from a study of the group. (*Phila. Med. Journ.,* Vol. 9, p. 208).

Dr. L. Webster Fox of Philadelphia, Penn. has devised an instrument as "A New Localizer for Determining the Position of Foreign Bodies in the Eye by the Roentgen Rays", and explains it at some length, illustrating in a clear way by means of nineteen cuts. (*Phila. Med. Journ.,* Vol. 9, p. 213).

Dr. Lewis Gregory Cole of New York City describes "A New Method of Locating Foreign Bodies by Means of the X-Ray." He gives four illustrative diagrams. (*Med. News,* Vol. 80, p. 502).

Lieut. J. Wishart Little of Blackheath, England and connected with the Indian Medical Service, describes "A Rapid and Simple Method of Localising Foreign Bodies by the X Rays." (London *Lancet,* Vol. I for 1902, p. 1765).

Dr. Karfunkel of "Bad Cudowa" has made a critical study for the "Determination of the True Size and Position of the Heart by

Means of The Roentgen Rays." (*Zeitschrift für klin. Med.,* Vol. 43, p. 304).

At a meeting of the Royal Academy of Medicine in Ireland on March 7th last Drs. J. Magee Finny and Edward J. M. Watson, both of Dublin, gave details of "Cases Illustrating the Aid of the Roentgen Rays in the Diagnosis of Intrathoracic Tumours", accompanied with three illustrative cases. (*Brit. Med. Journ.,* Vol. I for 1902, p. 633).

Dr. J. Rudis-Jicinsky of Cedar Rapids, Iowa reports "Two Cases of Intestinal Obstruction Diagnosticated by the X-Rays." He carried on some interesting observations on three dogs and an artificially produced intestinal obstruction was shown in three hours with the help of the X-Rays. He continued his observations by giving himself a similar obstruction and illustrated the condition then by these rays. (*N. Y. Med. Journ.,* Vol. LXXIV, p. 598).

Dr. W. W. Keen of Philadelphia, Penn. reports a "Ureteral Calculus Accurately Located by the X-Rays and Removed by an Extraperitoneal Operation." (*Journ. Amer. Med. Assoc.,* Vol. XXXVII, p. 567).

Dr. Paul Thorndike of Boston, Mass. relates four cases illustrating "The Value of the X-Ray in the Diagnosis of Renal Stone; Report of Four Cases." (*Boston Med. and Surg. Journ.,* Vol. CXLV, p. 423).

Dr. Charles Lester Leonard of Philadelphia, Penn. read a paper before the American Medical Association pointing out "The Indications for Operation in Calculous Nephritis and Ureteritis", in which he makes use of the Roentgen Ray method of diagnosis. (*Journ. Amer. Med. Assoc.,* Vol. XXXVII, p. 1451). This is the same line he was working in last year. About the same date he wrote again in another part of the country on "The Accuracy of the Negative Roentgen Diagnosis in Case of Suspected Calculous Nephritis and Urethritis." (*Phila. Med. Journ.,* Vol. 9, p. 222). Still later he describes somewhat in detail "The Roentgen Method in the Diagnosis of Renal and Ureteral Calculi." (*Med. News,* Vol. 80, p. 305).

Dr. William S. Haughton of Ireland writes "On the Use of 'X-Rays' in Medical Diagnosis", based on his observation of some 1900 odd patients in hospital and private practice. (*Dublin Journ. of Med. Science,* Vol. CXIII, p. 415).

Dr. Hugh Walsham of London, England writes "On the Use of

the Roentgen Rays in the Diagnosis of Pulmonary Tuberculosis." (*Phila. Med. Journ.,* Vol. 8, p. 406). He was studying in this line last year.

Dr. Espina Y Capo of Madrid, Spain gives an account of "The Importance of the X-Rays as a Means for the Early Diagnosis of Tuberculosis" as it appears to the Spanish practitioners. (*Med. Press and Circ.,* second Vol. for 1901, p. 161).

Dr. Heinrich Hildebrand of Hamburg, Germany writes on "The Diagnostic Value of the Roentgen Rays in Internal Medicine." He rather believes that too much has been expected of this method of diagnosis although he fully appreciates the fact that it is a considerable aid. He gives a complete bibliographic set of references. (*Muench. Med. Wochensch.,* Vol. XLVIII, pages 1957 and 2008).

Veterinary Surgeon J. V. Laddey of Arlington, N. J. reports on "The X-Ray as an Aid in the Diagnosis of Tuberculosis in Cattle." (*Amer. Vet. Rev.,* Vol. XXV, p. 886).

Dr. Albert Abrams of San Francisco, Cal. contributed to a symposium in his local Society by reading a paper on "Roentgen Rays in Pulmonary Disease." He gives a skiascopic table of thoracic diseases and promises a later contribution to this subject. (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 1142).

Dr. Hugh Walsham of London, England is again in print on these Rays and now relates two cases in illustration of his paper "On the Diagnosis of Pleural Effusion by the Roentgen Rays." He gives three illustrative cuts and states that "in doubtful cases of pleural effusion the Roentgen rays will enable us to say if fluid be present or not, and from the density of the shadow to give an opinion as to whether such fluid be serum or pus." (*Brit. Med. Journ.,* Vol. II for 1901, p. 8).

Dr. Th. Tuffier of Paris, France writes on the use of "Radiography in Pulmonary Surgery", in which he reports very definite results in five out of eight cases, the other three gave negative results. (*Rev. de Chir.,* Vol. 21, p. 122).

Dr. von Criegern of Leipzig, Saxony, Germany writes "On Pleural Adhesions and Related Conditions, with Reference to Diascopic Diagnosis." He describes the examination with the Roentgen Rays with a fluorescent screen as a diascopic examination of the chest. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 54).

Dr. Ernest W. Martin of Victoria Park, London, E., England

describes "A Case of Pneumothorax Shown by the Roentgen Rays." Later he states that he has shown five cases of a similar condition. (London *Lancet,* Vol. II for 1901, p. 846).

Dr. A. W. Crane of Kalamazoo, Mich. relates some "Practical Office Methods of Diagnosis, With Special Reference to the Roentgen Ray." (*Amer. Medicine,* Vol. III, p. 23).

In the treatment of malignant diseases the X-Rays have taken a very prominent place and many encouraging results have been recorded. It is natural to suppose that some discouragement would be reported from various quarters but a sufficient number of favorable results have been reported to warrant a much more extended use in this line.

Dr. William J. Morton of New York City has taken quite a prominent position in this line of treatment. He has stated that it is undoubtedly of great value to at times "report progress" on what has already been accomplished, and he therefore read a paper before the Harvard Medical Society of New York City at its regular meeting on February 22nd last on "The Treatment of Malignant Growths by the X-Ray, With a Provisional Report on Cases under Treatment." (N. Y. *Med. Record,* Vol. 61, p. 361).

Dr. Carl Beck of New York City is evidently studying the results of these Rays in a broad way for he now reports that he has made a study of "The Pathology of the Tissue Changes Caused by the Roentgen Rays, With Special Reference to the Treatment of Malignant Growths." He gives six interesting illustrations. (*N. Y. Med. Journ.,* Vol. LXXV, p. 881).

The use of these Rays for the treatment of cancerous manifestations on the surface was early thought of and it was not long before the dermatologists expressed great hope of good results. Surgeons all over the country have now taken up the subject in this line, and the literature is quite abundant.

Dr. George G. Hopkins of Brooklyn, N. Y. was one of the pioneers in this country to set up a definite apparatus planned on the one Prof. Finsen had worked with, and he has been energetic in promoting investigations and interesting other surgeons. Shortly after his work was alluded to here last year he contributed an article entitled "Light and Radiance in the Treatment of Disease", in which he paid particular attention to "The Treatment of Carcinomatous Growths by Roentgen Rays." (*Phila. Med. Journ.,* Vol. 8, p. 404 and continued in Vol. 9, p. 626).

Dr. Francis H. Williams of Boston, Mass. was one of the earliest and most conservative to investigate this line of treatment, and during the past year he has taken an especially prominent part not only in the actual clinical trials but in the discussions in the principal medical literature. At the annual meeting of the Massachusetts Medical Society in 1901, he read a paper on "Some Cases of Cancer Treated by the X-Rays." He there gives four very clear cuts of his results "before and after." The following conservative remarks are quoted by Dr. Williams as made by Dr. W. F. Whitney at one of the Shattuck Lectures on a previous evening. It is "clear that cancer is on the increase, not only in our State but in other parts of the world; and therefore I wish the more to bring before the profession, and through it as widely as possible to the laity, that we have in the x-rays a painless and a good method (how good it may take 2 or 3 years to decide) of treating many, if not all, forms of external cancer. The first steps have already been taken, and now it only remains to determine the limits of this method and the best way of carrying it out. This is simply a matter of time and of careful study." (*Boston Med. and Surg. Journ.*, Vol. CXLV, p. 294).

He illustrates another series of cases with very clear cuts when writing about the same time to another section of the country on the "Treatment of Certain Forms of Cancer by the X-Rays." (*Journ. Amer. Med. Assoc.*, Vol. XXXVII, p. 688).

Dr. J. F. Rinehart of Oakland, Cal. although acknowledging that "skin cancers are curable in almost all instances with the knife or with some one of the various caustic applications", turned his attention to the "Treatment of Epithelial Skin-cancers and Sycosis Non-Parasitica with the X-Ray." (*Phila. Med. Journ.*, Vol. 9, p. 221).

As far as the prominent medical literature would indicate the European observers have not published any results which they may have had as freely and with as much detail as those in the United States. In Great Britain for instance they have observed that conservatism which is so characteristic there and which has many advantages, but they sometimes find themselves far behind the times.

Dr. G. B. Ferguson of Cheltenham, England publishes an interesting case of "Recurrent Carcinoma Treated by the Roentgen Rays." (*Brit. Med. Journ.*, Vol. I for 1902, p. 265).

Dr. G. G. Stopford Taylor of Liverpool, England read a paper

before the Liverpool Medical Institution on "The Treatment of Cancerous Affections of the Skin by means of X Rays," illustrating his remarks by lantern slides and patients. He described in detail four cases and arrived at four definite conclusions. The discussion which followed will be of interest to those who are following up this subject. (London *Lancet,* Vol. I for 1902, p. 376).

Dr. Francis H. Williams of Boston, Mass. read an interesting paper on "The Use of the X-Ray in the Treatment of Some Forms of Cancer" at the regular stated meeting of the New York Academy of Medicine on March 6th last, and the discussion which followed by some prominent workers in the same line will be of interest to those who are attempting to keep posted on this subject. (N. Y. *Med. Record,* Vol. 61, p. 433).

Dr. G. E. Pfahler of Philadelphia, Penn. publishes the results of his observations in the Philadelphia Hospital on "The Treatment of Cutaneous Cancer by the X-Rays." He illustrates his article with seven very clear cuts. (*Ther. Gaz.,* Vol. XXVI, p. 145).

Dr. Charles Warrenne Allen of New York City read a paper before the New York County Medical Association in May last on "Radiotherapy in Cancer and Skin Diseases" in which he illustrates his results with four very clear cuts. (*N. Y. State Journ. of Med.,* Vol. II, p. 176).

Dr. J. F. Rinehart of Oakland, Cal. again writes on "The Use of the Roentgen Rays in Skin Cancer, etc., with Report of a Case." He gives three cuts. (*Amer. Journ. Med. Sciences,* Vol. CXXIV, p. 114).

Dr. John A. Lee of Brooklyn, N. Y. in writing on "The Therapeutics of the X-Rays" takes up the discussion of a phase a little out of the ordinary and which he says was until lately unsuspected, and that is the therapeutic uses of the X-Rays in skin diseases in general and closely allied conditions. He gives a short résumé of the applications heretofore recorded and relates two of his own cases. (*Brooklyn Med. Journ.,* Vol. XVI, p. 85).

Dr. G. H. Lancashire of Manchester, England summarizes the results he has obtained during the past twelve months in "The Therapeutic Employment of X Rays." He gives four clear cuts. (*Brit. Med. Journ.,* Vol. I for 1902, p. 1328).

Dr. Charles Warrenne Allen of New York City continues to study

"The Nature of Cutaneous Epithelioma, with Remarks on Treatment by the X-Rays." (N. Y. *Med. Record,* Vol. 61, p. 125).

Dr. Edward Schiff of Vienna, Austria reported at a meeting of the Gesellschaft der Aerzte of Vienna on February 21st last his successful treatment of a case of epithelioma located on the bridge of the nose on which the Roentgen Rays were made use of. (*Wien. klin. Wochensch.,* Vol. XV, p. 243).

Dr. James Francis McCaw of Watertown, N. Y. writes on "Primary Epithelioma of the Uvula and Soft Palate and Treatment with the Roentgen Rays; Report of a Case." (*N. Y. Med. Journ.,* Vol. LXXVI, p. 225).

Dr. G. G. Stopford Taylor of Liverpool, England has continued his observations on the effect produced by the Roentgen Rays in two cases of epithelioma complicating lupus erythematosus treated by scraping and finally healed by the X-Rays. He gives clear illustrations of two cases and four stages in each case. (*Brit. Med. Journ.,* Vol. I for 1902, p. 1080).

Drs. T. Sjögren and E. Sederholm of Stockholm, Sweden have studied "The Therapeutic Value of the Roentgen Rays in Dermatitis" by treating 76 patients affected with a variety of skin diseases, and now publish their results. (*La Sem. Méd.,* Vol. 22, p. 16).

Dr. Guido Holzknecht of Vienna, Austria reports a case of alopecia areata successfully treated by the X-Rays, completing his favorable results in four months. He gives four cuts showing what has been accomplished. (*Wien. klin. Rundschau,* Vol. XV, p. 753).

Dr. Edward Schiff of Vienna, Austria reports good results in the use of the Roentgen Rays in diseases of the hair, after watching some of the cases for more than three years. (*Wien. Med. Blätt.,* Vol. XXIV, p. 699).

Dr. William Allen Pusey of Chicago, Ills. has evidently continued his observations throughout the past year as he now publishes a review of recent literature and his personal experience with "Roentgen Rays in the Treatment of Diseases of the Skin." He illustrates this review with seven very clear cuts. (*Journ. Amer. Med. Assoc.,* Vol. XXXVII, p. 820).

He follows this up several months later with another series of 36 cases of epithelioma, for all of which he claims successful results. He gives some 30 excellent cuts. (*Journ. Amer. Med.*

Assoc., Vol. XXXVIII, p. 911). Again he reports on "Acne and Sycosis Treated by Exposures to Roentgen Rays", enumerating eleven cases. (*Journ. of Cutan. and Genito-Urinary Diseases,* Vol. XX, p. 204).

Lupus vulgaris was one of the earliest superficial affections on which the Roentgen Rays were turned, and prompt and encouraging results were noted. The favorable results continue and the number of observers are increasing throughout the world.

Dr. Clarence A. Greenleaf of Rochester, N. Y. writes on "The Therapeutic Value of the X-ray in Lupus Vulgaris" and relates four cases. (*Buffalo Med. Journ.,* Vol. XLI, p. 189).

Dr. George H. Rodman of East Sheen, London, S. W., England publishes his "Notes of a Severe and Long-standing Case of Lupus Treated by the Application of the X Rays." (London *Lancet,* Vol. II for 1901, p. 1330).

Dr. T. Coke Squance of Sunderland, England also publishes the details of "A Case of Lupus Vulgaris Treated by Exposure to X Rays." (London *Lancet,* Vol. II for 1901, p. 1332).

Dr. Edward Swales of Maidstone, England reports "Two Cases of Lupus Vulgaris Successfully Treated with Urea Pura and the X Rays." (London *Lancet,* Vol. I for 1902, p. 658).

Dr. Richard F. Woods of Philadelphia, Penn. relates "A Case of Lupus Erythematosus Cured by the X-Ray." He gives two cuts and concludes as follows: "The rapidity of cure in this case of tubercular disease of the skin (although some authorities doubt the tubercular nature of lupus erythematosus) is very satisfactory, and, with the other cases that have been reported, would warrant a broadening of the field of experimentation with the X-rays in other tubercular affections. (*Amer. Journ. Med. Sciences,* Vol. CXXII, p. 834).

A discussion of the treatment of Lupus occupied a prominent place in the Section of Dermatology at the annual meeting of the British Medical Association in August 1901. Mr. Malcolm Morris of St. Mary's Hospital, London, England opened the "Discussion on the Treatment of Lupus Vulgaris and Some Other Diseases of the Skin by Finsen's Light Method and X Rays." The remarks of those discussing this subject will be of interest to observers studying in this line. (*Brit. Med. Journ.,* Vol. II for 1901, p. 849).

Mr. Malcolm Morris and Mr. S. Ernest Dore later contributed "Further Remarks on Finsen's Light and X-Ray Treatment in

Lupus and Rodent Ulcer." (*Brit. Med. Journ.,* Vol. I for 1902, p. 1324).

The Finsen light process has made remarkable strides during the past year, especially in England where it will be remembered an Institution was established modelled on the plan of the one in Copenhagen. Now the treatise of Prof. Niels R. Finsen has been translated by an English dermatologist, Dr. James H. Sequeira, in charge of the Light Department at the London Hospital.

Dr. A. K. Warner of Chicago, Ills. gives a short but interesting account of his visit to Finsen's Institute in the *Journal of the American Medical Association* (Vol. XXXVIII, p. 188).

At an interesting meeting held in Manchester (England) on February 4th last, a report was made that among the 33356 patients presenting themselves at the Manchester and Salford Hospital for Diseases of the Skin, 6633 were for the "light" treatment, showing an increased interest in this line of treatment from that one quarter alone. (London *Lancet,* Vol. I for 1902, p. 480).

Dr. S. Bang of Copenhagen, Denmark discusses the whole broad question of "The Light Treatment" in an attempt "to unravel the tangled state." (*Berlin. klin. Wochensch.,* Vol. XXXVIII, p. 1228).

Dr. Kattenbracker of Spandau, Prussia reports on the "Progress in the Domain of Finsen's Treatment of Lupus." (*Centralbl. für Chir.,* Vol. 29, p. 121).

Dr. Arnold Sack of Heidelberg, Germany reports on The Method, Nature and Progress of Finsen's Phototherapy. (*Muench. Med. Wochensch.,* Vol. XLIX, pages 530 and 578).

Prof. O. v. Petersen of St. Petersburgh, Russia reports "A Case of Oriental Sore Treated with Finsen's Phototherapy." (*St. Petersburgh Med. Wochensch.,* Vol. XIX, p. 49).

Dr. P. C. Clemensen of Chicago, Ills. publishes "A Brief Review of Finsen's Phototherapy" and gives several interesting cuts together with a reproduction of a photograph of Prof. Finsen himself. (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 919).

Some "Improvements in the Apparatus Used for the Treatment of Lupus by Light Rays" appeared in the London *Lancet* (Vol. II for 1901, p. 88).

An illustration of "The Lortet-Genoud Lamp," the lamp used at the London Hospital and two separate cuts of how the whole is

used practically, appeared in the *British Medical Journal* (Vol. I for 1902, p. 44).

Dr. Dawson Turner of Edinburgh, Scotland related "An Experiment with Ultra-Violet Light" before the Royal Scottish Society of Arts in January last. (*Brit. Med. Journ.,* Vol. I for 1902, p. 705).

Dr. Ignazio Dionisio of the University of Turin, Italy relates six cases of ozena which he treated by the incandescent electric light. His plan is to either direct the light into the nose by means of reflectors or introduce the lamp immediately into the nostril, of course, protected by means of a water-jacket. Again he has introduced a larger lamp into the mouth illuminating the nasal cavity through the transparent facial bones. He cannot actually state that his cases were cured but he feels encouraged in the use of the electric light. (*Gaz. Med. Italiana,* Vol. LIII, p. 51).

Dr. D. Berry Hart of Edinburgh, Scotland writes on "The Curative Effect of the X Rays on Callous Sinuses of the Abdominal Wall." He records two cases and advises further trial of this form of treatment in all the large hospitals. (*Brit. Med. Journ.,* Vol. I for 1902, p. 1330).

Dr. James C. Johnston of New York City relates some cases of "Precancerous Keratosis Probably Due to X-Rays." (*Phila. Med. Journ.,* Vol. 9, p. 220).

Dr. Carl Beck of New York City reported in Germany a case of lymphangio-sarcoma in a man 36 years old whom he had treated by means of the Roentgen Rays. The sarcoma was on the left ankle and he operated three times upon it before the Rays were used. He exposed it then for two or three days to the influence of the Rays, beginning at first with ten minute exposures and advancing up through twenty, thirty and at the last forty-five minute exposures. He was gratified not only to notice that after nine weeks there was no recurrence of the growth but several smaller tumors higher up on the leg gradually disappeared although the Rays had not been directed on them. (*Muench. Med. Wochensch.,* Vol. XLVIII, p. 1284).

Dr. William Allen Pusey of Chicago, Ills. relates three cases of sarcoma and two of Hodgkin's disease treated by exposures to X-Rays. He gives four very clear cuts and states that the present is only a preliminary report. (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 166).

Dr. William B. Coley of New York City read a paper before the American Surgical Association at Albany, N. Y. in June last relating the details of some ten cases illustrating "The Influence of the Roentgen Ray Upon the Different Varieties of Sarcoma." (*Med. News,* Vol. 81, p. 542).

Mr. James Startin, surgeon to the London Skin Hospital, reports "On X Rays in the Treatment of Lupus and Rodent Ulcer", relating five cases with very encouraging results. (London *Lancet,* Vol. II for 1901, p. 144).

At a meeting of the Edinburgh (Scotland) Medico-Chirurgical Society on December 18th last, Dr. Allan Jamieson exhibited a case of a strong healthy woman 41 years of age who had come to him with a rodent ulcer on the left side of her forehead. This he had treated partly with the X-Rays and is now apparently cured. (*Brit. Med. Journ.,* Vol. I for 1902, p. 18).

Dr. John Williamson Pugh of Brighton, England reports "Four Cases of Rodent Ulcer Treated by X Rays." He gives very clear cuts of two of his cases, showing the "before and after." (*Brit. Med. Journ.,* Vol. I for 1902, p. 882).

Dr. G. G. Stopford Taylor of Liverpool, England relates "A Case of Rodent Ulcer of the Nose and Eyelids Treated with the X Rays." (London *Lancet,* Vol. I for 1902, p. 1395).

Drs. Charles K. Mills and G. E. Pfahler of Philadelphia, Penn. have evidently had the satisfaction of reporting the second case on record of a "Tumor of the Brain Localized Clinically and by the Roentgen Rays—With Some Observations and Investigations Relating to the Use of the Roentgen Rays in the Diagnosis of Lesions of the Brain." (*Phila. Med. Journ.,* Vol. 9, p. 268).

Dr. Moriz Benedikt of Vienna, Austria has been experimenting on the use of "The Roentgen Rays in Cerebral and Cranial Affections and Forensic Medicine." (*Deut. Med. Wochensch.,* Vol. XXVIII, p. 405).

At a meeting of the Nether Rhine and Westphalian Society of Pediatricians on March 9th last at Düsseldorf, Rhenish Prussia, Dr. Rey of Aachen, Germany exhibited some skiagraphs of the wrists of children four years of age, showing evidences of cretinism. He feels convinced that this is a valuable aid in the diagnosis as it gives a clear demonstration of the arrest in osseous development. (*Jahr. für Kinderheilk.,* Vol. 56, p. 225).

Dr. Davis Walsh of London, W., England reports on his experi-

ence in "The Removal of Superfluous Hair by a Combination of X-Ray Exposure and Electrolysis." (London *Lancet,* Vol. II for 1901, p. 1191).

Dr. Alfred T. Schofield of London, W., England adds to the discussion of the value of the Roentgen Rays in removing superfluous hair, by giving his experience as adverse to it. (*Brit. Med. Journ.,* Vol. II for 1901, p. 1452).

Dr. John Harold Philip of San Francisco, Cal. writes on "The X-Ray in Determining the Limits of the Frontal Sinus." (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 764).

Dr. Thomas W. Huntington of San Francisco, Cal. contributes a "Note on X-Ray Burns and their Treatment." He excised the spot on the abdomen and grafted a portion of skin. (*Annals of Surg.,* Vol. XXXIV, p. 808).

Dr. E. A. Codman of Boston, Mass. has made "A Study of the Cases of Accidental X-Ray Burns Hitherto Recorded." (*Phila. Med. Journ.,* Vol. 9, pages 438 and 499).

Dr. Wiesner of Aschaffenburg, Bavaria in writing on the dermatitis produced by these Rays relates the case of a patient who had an eruption on the hands, arms, face and trunk, very similar to chronic dermatitis. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 1047).

Dr. Robert Kienbocck of Vienna, Austria relates some odd effects of the X-Ray noticed during his experiments on pigeons. After repeated exposures lasting some two weeks he noticed that the feathers on the back fell out and shortly after those on the breast, neck and head also dropped out, and he cautions physicians that severe burns and ulcers are caused only by over-exposure. He illustrates his article with eleven cuts. (*Interstate Med. Journ.,* Vol. IX, pages 1 and 60).

At a meeting of the London Dermatological Society on November 13th last, Dr. James H. Sequeira showed a lady who had suffered severely from X-Ray dermatitis. Four and a half years previous the patient had first come under observation. (*Brit. Journ. Derm.,* Vol. XIV, p. 19).

Dr. J. W. Sherer of Kansas City, Mo. reports a case of "Conjunctivitis from X-Rays; Incipient Retinitis Apparently Due to the Same Cause; Report of a Case." (*N. Y. Med. Journ.,* Vol. LXXIV, p. 543).

Dr. Carl Beck of New York City writes on "The Pathological

and Therapeutic Aspects of the Effects of the Roentgen Rays." He illustrates with four very clear cuts. (N. Y. *Med. Record,* Vol. 61, p. 83).

Dr. Seabury W. Allen of Boston, Mass. contributes some "Notes on the Analgesic Effects of X-Rays." He relates some eight cases and states that he hopes his present report will stimulate others to investigate further along these lines. (*Amer. Medicine,* Vol. III, p. 461).

Dr. F. Robert Zeit of Chicago, Ills. has made a study of the "Effect of Direct, Alternating, Tesla Currents and X-Rays on Bacteria." He illustrates his report with thirteen excellent cuts. *Journ. Amer. Med. Assoc.,* Vol. XXXVII, p. 1432).

Dr. H. Rieder of Munich, Bavaria also reports the results of a continuation of his experiments on the bactericidal power of these Rays. He began as far back as 1898 and naturally has something of value to report. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 402).

Dr. Metzner of Dessau, Northern Germany describes a transportable Roentgen apparatus for the use of the practicing physician. He gives two cuts. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 1004).

Dr. Alexander B. Johnson of New York City read a paper before the New York Surgical Society on October 23rd last describing his technique in "Stereoscopic Radiography." He gives two figures and four excellent plates. (*Annals of Surg.,* Vol. XXXV, p. 455).

Dr. Harry E. Small of Sterling, Ills. reports that he has made use of these Rays in conjunction with a local jeweller in detecting false and true gems. (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 1171).

Salipyrin (reported to be a true Salicylate of Antipyrin), although still much used, has not been commented upon individually in the current medical literature of the past year.

Salol (Phenyl Salicylate) has lost none of its prominence during the past year.

Dr. R. S. Thomson and Mr. Andrew Love of Glasgow, Scotland give the results of their experience with "Salol in the Treatment of Smallpox." They tabulate their results in a summary of 77 cases. (*Glasgow Med. Journ.,* Vol. LVII, p. 401).

Drs. John Biernacki and J. C. Muir of Plaistow Hospital, Lon-

don, E., England state that they have treated a series of 1000 cases of smallpox to all of which were given a dose of 1 gramme (15.4 grains) of Salol every two hours. The majority of patients have borne it well, but it is reported that, taking the results as a whole, they are very disappointing in comparison with the first small group of cases. However these observers believe that this agent although limited in value is useful in these cases. They now urge their fellow-practitioners not to abandon the treatment even though these results may be disappointing, as they hope that recognition of its limited utility will insure for it a continued trial by others. (*Brit. Med. Journ.,* Vol. II for 1902, p. 179).

The following "Emulsion of Salol" taken alone or with milk is claimed to be of service in the treatment of gonorrhea and cystitis:

Salol.	4.0 grammes	(61.7 grains)
Acacia.	4.0 "	(61.7 ")
Tragacanth.	0.2 "	(3.1 ")
Tinct. Tolu. 10.0	"	(154.3 ")
Syrup of Tolu. 30.0	"	(nearly 1 ounce)
Distilled Water sufficient quantity		

(*Journ. de Méd. de Paris,* Vol. XIII, p. 496).

Salophen (Acetyl-Para-Amido-Salol) has not been individually commented upon in the current medical literature of the past year.

Sanose (the albuminous preparation containing 80 per cent. Casein and 20 per cent. Albumose, which is not a chemical combination but rather a mechanical mixture) has been practically unheard of in the current medical literature of the past year.

Silberol (Silver Sulpho-Carbolate) has not been heard of in the current medical literature of the past year.

Somatose (the tonic and nutrient) is still an article in use by the medical profession, but it has been less commented upon individually in the current medical literature of the past year than previously.

Somnoform is the name given to a new anæsthetic which is claimed to be a mixture of the following ingredients:

Ethyl Chloride. 60	parts
Methyl " 35	"
Ethyl Bromide. 5	"

Dr. Chaminade of Bordeaux, France reported to the Bordeaux Medical and Surgical Society on December 20th last his "Clinical Observations with a New Anæsthetic, Somnoform." He used it extensively in 100 cases and states that it is particularly valuable in minor surgery. He claims that it is more rapid in action than ethyl chloride. (*Gaz. hebdom. des Sciences Méd. de Bordeaux,* Vol. 23, p. 6).

Sozoiodol (Di-Iodo-Para-Phenol-Sulphonic Acid)—containing 54 per cent. of iodine, 20 per cent. of phenol and 7 per cent. of sulphur—has not been individually commented upon in the current medical literature of the past year.

Sublamin is the name given to one of the recently offered antiseptics, made by a well-known manufacturer, and consisting of a combination of Mercury Sulphate and Ethylen-Diamin. It is recommended in a 3 per cent. solution for the disinfection of the operator's hands after washing with soap and water. (*Therap. Monats.,* Vol. XVI, p. 35).

Sulphonal (Di-Ethyl-Sulphon-Di-Methyl-Methane) is still very largely used and calls for no special mention here. In practice it is used as a matter of course in a certain line of cases, and therefore does not call out individual comment in the medical literature.

Tachiol is the name given to Silver Fluoride and is offered as a new antiseptic. It was announced at a meeting of the Royal Medical Academy of Rome, Italy on January 26th last by Prof. Durante, and the report came that investigations were still going on and an account of its full properties was promised shortly. What little is known about it at present is given in the London *Lancet* (Vol. I for 1902, p. 393).

Tannigen (Di-Acetyl-Tannin)—the odorless and tasteless form of Tannin, insoluble in water and acids but readily soluble in alkaline solutions—is still largely used but rarely commented upon individually.

Dr. Pierre Coulloc'h read a thesis before the Faculty of Paris on the use of this agent in the treatment of diarrhea. The doses he recommends for children between one month and one year are 400 to 600 milligrammes (6.2 to 9.3 grains). To those over one year he recommends from 600 milligrammes to 1 gramme (9.3 to 15.4 grains). To adults he gives from 1 to 1.5 grammes (15.4 to 23.1 grains). (*Paris Thesis* No. 21, Vol. VI, p. 1219).

Dr. A. Tausig of Vienna, Austria after having used this agent

for infants, children and adults ever since 1896 still recommends it, and particularly in so-called nervous diarrheas. He gives a list of some 23 cases. (*Deut. Medicinal-Zeitung,* Vol. for 1901, p. 590).

Tannoform (the condensation product of Tannin and Formaldehyde) is still largely used but has not been commented on individually in the current medical literature of the past year.

Thiocol (Potassium Sulpho-Guaiacolate, containing 60 per cent. of Guaiacol) has not been confined to use in tuberculosis during the past year, but has been apparently of service in successfully checking diarrhea. It has been given in adult doses of 500 milligrammes (7.7 grains) three times a day, and to children in from 200 to 500 milligrammes (3.1 to 7.7 grains).

Dr. Hugo Winternitz of Halle on the Saale, Prussian Saxony has made use of this agent in quite a large hospital practice claiming that the out-of-door and dietetic treatment are not alone sufficient. He enumerates quite a series of agents which he has tried, and concludes that Thiocol has advantages over creosote or guaiacol by reason of its being palatable and free from disagreeable sequelæ. He gives the details of 8 out of 16 cases in which Thiocol had been employed. (*The Therapist,* Vol. XII, p. 25).

Dr. M. Eberson of Tarnów, Austrian Galicia reports that he prefers Thiocol to creosote carbonate and the other creosote preparations in the treatment of pneumonia. (*Beilage of Aerzt. Central-Zeitung,* Vol. XIV, p. 29).

Thiosinamin (Allyl-Sulpho-Carbamide) has received a little more attention during this past year.

Dr. Fritz Juliusberg of Breslau, Prussia has written quite elaborately "On the Action, Method of Employment, and Secondary Effects of Thiosinamin." He coincides in a general way with the claim of von Hebra who first introduced this article, that it is of much value in softening scar tissue. He does not however use a 15 per cent. alcoholic solution as recommended by von Hebra, but rather prefers it in the following proportions:

Thiosinamin.	10 parts
Glycerin.	20 "
Distilled Water to make up to.....	100 "

He uses one Pravaz syringeful—100 milligrammes of Thiosinamin

(1.54 grains)—injected into the interscapular region every other day. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 591).

Dr. Ludwig Teleky of Vienna, Austria reports on the successful use of "Thiosinamin in the Treatment of Cicatricial Stenosis of the Esophagus" due to drinking a caustic solution. He gives a bibliography of the subject. (*Wien. klin. Wochensch.,* Vol. XV, p. 198).

Dr. Joseph C. Beck of Chicago, Ills. reports on the use of "Thiosinamin in Ear Diseases." He relates his experience in 14 cases in which he found that little improvement took place, except as to slightly relieving the tenderness, but when used in conjunction with electrolysis an Eustachian bougie could be more readily passed. (*The Laryngoscope,* Vol. XII, p. 435).

Dr. George F. Suker of Chicago, Ills. reports on "Thiosinamin. —Clinical and Experimental Observations with Reference to Corneal Opacities and Other Ocular Lesions." He concludes with quite a complete bibliography. (*Journ. Amer. Med. Assoc.,* Vol. XXXIX, p. 299).

Dr. Henry S. Upson of Cleveland, Ohio read a paper before the Union Medical Association of Northeastern Ohio on "Thiosinamin in Chronic Joint Affections." He relates six cases and concludes as follows:

"The few cases here reported make it probable that thiosinamin will be found useful in aiding the absorption of fibrous deposits due to rheumatism. If further investigation proves this to be the case, it will be seen that a wide range of usefulness is open for it among patients who have formed a large part of the material for osteopaths and other quacks." (*Amer. Medicine,* Vol. III, p. 152).

Thyroid Extract (Thyro-Iodin) has not been as enthusiastically spoken of during the past year as in some previous years, but it is still thought considerably of by some practitioners.

Dr. Hertoghe of Antwerp, Belgium reported at a meeting of the Paris Neurological Society on December 5th last a case of an eight year old child who had had a typical appearance of myxedematous infantilism, to whom had been given Thyroid Extract for five years. The case now showed that the myxedematous condition had totally disappeared. (*Gaz. hebdom. de Med. et de Chir.,* Vol. VI, p. 1233).

Dr. E. Ausset of Lille, France has made quite a study of this

Extract in its influence on nutrition, especially in infants. He warns his fellow-practitioners against lack of care in its administration. He advises its administration in very small doses to test the susceptibility of the little patient, and in order to be able to increase the dose gradually an Extract must be used whose strength is known and of recent manufacture. (*Gaz. hebdom. de Med. et de Chir.,* Vol. VI, p. 889).

Drs. Bézy and Stoianoff have also made a study in this line and now report "On the Thyroid Treatment in Infantile Myxedema." The particular case they report is that of a girl five years old who had been given rapidly increasing doses of the thyroid gland. Photographs were taken showing the improvement. He gives three cuts in illustration. (*Presse Medicale,* second half of Vol. 9, p. 61).

Dr. E. Dupré of Paris, France reported at a meeting of the Paris Neurological Society on February 6th last a case of a fifteen year old girl who had the physical appearance of being only nine years old. She showed symptoms of mild myxedema at the time she began to menstruate which completely disappeared under Thyroid treatment. (*Gaz. hebdom. de Méd. et de Chir.,* Vol. VII, p. 150).

Dr. Theodor Heller of Vienna, Austria has made a study of the "Mental Development of Cretinous Child Treated with Thyroid Extract" from which he draws the conclusion that an attempt can be made to transform mentally deficient children who are therefore untrainable, into trainable ones, by making use of this Extract. (*Wien. klin. Rundschau,* Vol. XVI, p. 87).

Dr. Arthur Hall of Sheffield, England reports a "Case of Sporadic Cretinism, in which a Relapse Occurred Owing to Omission of Thyroid Extract." (*Brit. Med. Journ.,* Vol. I for 1902, p. 1259).

Drs. Variot and Pierre Roy of Paris, France reported the case of a 4½ year old child who had a typical attack of exophthalmic goîter which had followed whooping cough. It now showed an improved condition under small doses of the thyroid gland. (*Gaz. hebdom. de Méd. et de Chir.,* Vol. VI, p. 1182).

Dr. F. John Poynton of London, England reports "Two Cases of Partial Cretinism which Developed Swelling of the Thyroid on Cessation of Treatment by Thyroid Extract." He concludes as follows:

"I have but little doubt that such cases as these have been observed before, but in most of our textbooks the value of the treatment of simple goître by thyroid extract is alluded to as a fact, without any very definite reason for the fact. These two cases cannot fail, I think, to increase our confidence in the trial of this method, especially in those cases in which perhaps iodine might have been used in preference. In both instances it will be noted that the diagnosis of simple goître would probably have not been made had not the former history been known; and it is very possible that some of these cases of simple goître may show slight symptoms of cretinism, which would be easily overlooked or misconstrued as signs of general ill-health." (*Brit. Med. Journ.,* Vol. I for 1902, p. 1143).

Dr. Schultes of Illnau, Switzerland writes "On Antithyroidin Treatment of Basedow's Disease." He reports the case of a 49 year old woman showing typical symptoms. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 834).

Dr. Briquet of Paris, France discusses the mooted question as to whether the iodine claimed to be in the Thyroid Gland is the efficient ingredient or not. (*Presse Medicale,* first half of Vol. for 1902, p. 138).

Dr. H. Oliphant Nicholson of Edinburgh, Scotland read a paper before the Edinburgh Obstetrical Society on March 12th last on the use of Thyroid Extract in puerperal eclampsia. He relates four cases in detail. (*Journ. Obstet. and Gynecol.,* Vol. II, p. 40).

Trional (Di-Ethyl-Sulphon-Methyl-Ethyl-Methane) has lost little of its prominence during the past year, but quite a proportion of the reports given take the form of poisoning cases or unfortunate results. However Dr. J. Noonan Meade of Banff, Scotland reports his successful use of this agent in not only delirium tremens but in a case of chorea of the acute or Sydenham type. As far as his observation goes this is the first case which has been recorded of its use in chorea. Its action was very prompt and he urges further trial. (*Brit. Med. Journ.,* Vol. II for 1901, p. 1339).

Dr. Edward Mackey of Brighton, England follows up Dr. Meade's mention of his case by a statement that he had tried this agent in some cases of extreme restlessness with successful results. He briefly records one case. He also desires it to be known that he corroborates the experience of Dr. Weir Mitchell of Philadelphia, Penn. in the use of Trional in epilepsy, finding it at times a use-

ful substitute for the bromides. Finally Dr. Mackey states that "since the above was written a very severe case of chorea gravis in a youth of 17, has been much relieved by the same sedative, though hyoscin was also required and cacodylate injections. Trional can only be considered an adjuvant, but it is a good one." (*Brit. Med. Journ.,* Vol. II for 1901, p. 1805).

Lieut.-Col. W. Hume Henderson, Surgeon in Bombay, India writes to cordially endorse Dr. Meade's reports, and relates a case of his own—a very tall girl 16 years old "who had evidently outgrown her strength." She had "violent choreic movements of all the limbs, speech was affected, and there was considerable fever." The initial dose was 650 milligrammes (10 grains) three times a day. She rapidly convalesced, was sent away for a change of climate and scene, and became strong and well without any return of the chorea. (*Brit. Med. Journ.,* Vol. I for 1902, p. 267).

Some of the typical poison cases may be put on record here for convenience in referring.

Dr. Edward M. Thompson of New York City reports "A Case of Trional Poisoning" in a married woman 35 years old who was suffering from neurasthenia. To relieve the persistent insomnia Trional had been given. Hot water bottles and hypodermic injections of strychnine sulphate were successful in relieving the symptoms. (*N. Y. Med. Journ.,* Vol. LXXIV, p. 709).

Dr. Archibald Church of Chicago, Ills. writes on "Trional Fatalities" and relates a case in detail. (*Amer. Medicine,* Vol. II, p. 729).

Dr. H. Schweitzer rather questions Dr. Church's reasoning in reporting Trional as the poisonous drug one would infer from reading his article. He claims that Dr. Church has used rather false reasoning which wrongly discredits the drug. (*Amer. Medicine,* Vol. III, p. 58).

Dr. C. H. Kingsbury of Oxford, Mass. reports a case of "Trional Poisoning" in which death resulted. (*Amer. Medicine,* Vol. II, p. 983).

Dr. M. Rosenfeld of Strassburg, Germany reports a case of poisoning by Trional in a 28 year old woman who showed well-marked hallucinations of a paranoic type; death resulted. (*Therap. Monats.,* Vol. XVI, p. 161).

Tropacocaine (Benzoyl-Pseudo-Tropeine) has been rather

forced to occupy a more or less retired position on account of its cost, but it is still used and good results are reported.

Dr. Friedrich Neugebauer of Mährisch-Ostrau, Moravia has made a study of "Spinal Analgesia with Tropacocaine" in 60 cases, of which he gives an account. He describes his technique on which he lays considerable stress. He believes that the maximum dose should not exceed 0.06 gramme ($\frac{9}{10}$ of a grain). (*Wien. klin. Wochensch.,* Vol. XIV, pages 1229, 1261 and 1299).

Dr. Kurt Kamann of Munich, Bavaria relates the history of a case of eclampsia in which prompt relief followed the spinal injection of Tropacocaine. (*Muench. Med. Wochensch.,* Vol. XLIX, p. 831).

Tuberculin (Parataloid) has received rather more attention in the current medical literature of the past year owing largely to the announcement of Dr. Robert Koch of Berlin, Germany concerning his later observations. Practically the whole world is familiar with the statement Dr. Koch made before the British Congress on Tuberculosis last July. It has been read in all languages, but for the ready reference of those desiring to read it later, it may be stated here that his "Address on The Fight Against Tuberculosis in the Light of the Experience that has been gained in the Successful Combat of Other Infectious Diseases" will be found in the *British Medical Journal* (Vol. II for 1901, p. 189).

An English Veterinary Surgeon, Harold Sessions read a paper at the same British Congress on "Tuberculin as a Diagnostic Agent" in which he summarizes as follows: "In conclusion, I would beg to move that this Congress, believing that tuberculin is an efficacious and reliable diagnostic agent, liable to gross misuse whereby it becomes a public danger, would ask the Minister of Agriculture and the President of the Board of Trade whether it would not be feasible to allow tuberculin to be issued by a central authority only, who should demand from those who use it a statement of the results obtained. The advantages derived being the use of properly prepared standard tuberculin, the compilation of much-needed statistics, the minimising of the danger of the fraudulent or wrong use of tuberculin, and the supervision of the temperature charts." (London *Lancet,* Vol. II for 1901, p. 208).

Dr. Sheridan Delépine of Manchester, England is still working in this line. He also read a paper before the same British Congress on "How Can the Tuberculin Test be Utilised for the Stamping out

of Bovine Tuberculosis?" (London *Lancet,* Vol. II for 1901, p. 509).

Dr. G. A. Heron of London, England has been studying "The Therapeutic and Diagnostic Value of Tuberculin in Human Tuberculosis", and calls attention to the fact that this agent has fallen into discredit from its frequent use in unsuitable cases as well as from its being given in too large doses. (*Med. Press and Circ.,* second Vol. for 1901, p. 211).

Dr. J. Petruschky of Danzig, Prussia also believes that the use of Tuberculin has been too quickly condemned. His experience would lead him to believe that it is an excellent agent in the treatment of early cases of pulmonary tuberculosis. He has some very decided opinions which are well worth reading by those who are interested in this line. (*Berlin. klin. Wochensch.,* Vol. XXXIX, p. 98).

Dr. Weicker of "Görbersdorf" writes on "The Tuberculin Treatment and Sanatoria", and confirms previous statements made by other well-known observers that a permanent cure cannot be rightly assured until an injection of Tuberculin gives negative results. (*Berlin. klin. Wochensch.,* Vol. XXXIX, p. 74).

Dr. L. Guinard of the Sanatorium Friedrichsheim, Baden writes "On the Diagnostic Injections of Tuberculin.—Technique and Results." He reports that 27 out of the 37 patients injected reacted positively and it was only necessary to keep two out of the 37 in bed for a few days. (*Lyon Méd.,* Vol. XCVIII, pages 703 and 743).

Dr. Lydia Rabinowitsch of Berlin, Germany was another contributor to the British Congress on Tuberculosis in a paper on "The Infectiousness of the Milk of Tuberculous Cows; the Bacteriological Diagnosis, and the Practical Value of Tuberculin for the Extermination of Tuberculosis among Cattle." The following conclusion is drawn: "We may therefore say that combined with the clinical and bacteriological examinations the tuberculin test furnishes us with the safest means of obtaining milk free from tubercle bacilli as well as of rearing cattle free from tuberculosis." (London *Lancet,* Vol. II for 1901, p. 838).

Dr. W. E. Casselberry of Chicago, Ills. writes on "The Tuberculin Test: Cases in which it seemed Justified and Decisive." He relates nine cases. (*Med. News,* Vol. 79, p. 575).

Dr. Arthur Latham of Brompton, England delivered "A Clinical Lecture on The Early Diagnosis of Pulmonary Consumption,

with Especial Reference to the Value of Tuberculin." (London *Lancet,* Vol. II for 1901, p. 1781).

Dr. E. A. DeSchweinitz of Washington, D. C. writes on "Tuberculin and Products of the Tubercle Bacillus." (*N. Y. State Journ. of Medicine,* Vol. II, p. 9).

Dr. B. S. Moore of Syracuse, N. Y. relates "The Experience of Syracuse, N. Y. with the Compulsory Tuberculin Test of all Dairies Furnishing Milk to the City." (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 226).

Dr. C. S. Engel of Berlin, Germany writes "On the Treatment of Tuberculosis with Tuberculin", and after reviewing what has been accomplished with Koch's Tuberculin and Tuberculin-R, reports that 14 cases of bronchitis responded to the Tuberculin Test. He would therefore recommend the use of Tuberculin in all the members of a family who have a tubercular history although they may not yet give the symptoms of tuberculosis. (*Berlin. klin. Wochensch.,* Vol. XXXIX, p. 432).

Dr. C. M. Wood of Dunning, Ills. writes on "The Diagnostic Value of Tuberculin." He gives a tabular review of the 100 cases injected, and four charts showing tracings. (*Journ. Amer. Med. Assoc.,* Vol. XXXVIII, p. 996).

The discussion which has taken place between the Editor of the *Therapeutic Gazette* and Dr. Silvio von Ruck of Asheville, N. C. will be of interest to those who are studying in this line. (*Ther. Gaz.,* Vol. XXVI, pages 301 and 305).

Dr. W. Camac Wilkinson of Sydney, New South Wales relates his "Observations on Tuberculin as a Remedy in Tuberculosis of the Lungs." He concludes as follows: "The time will come when it will be generally admitted that Koch has not only taught us all we know of the etiology of pulmonary and other forms of tuberculosis, but has found also a remedy which in skilled hands will prove an inestimable boon to the large section of humanity afflicted with pulmonary tuberculosis." (*Brit. Med. Journ.,* Vol. I for 1902, p. 1389).

A point concerning the diagnostic value of Tuberculin for cattle will be of interest to quote here: "The Agricultural Department of Aberdeen University has issued a short report bearing upon the question as to the most suitable times for taking the temperature of cattle after inoculating them with tuberculin. In an investigation reported by the department in 1899 the results of the

tuberculin test did not appear satisfactory, as out of 42 animals proved to be tuberculous, 17 had failed to react. The temperature of the tested animals had been taken at 10, 11, 12, and 13 hours after inoculation. The interval between successive observations was not long enough, and it is surprising to hear that Professor Nocard pointed out that if intervals of 3 hours had been allowed, commencing with the twelfth hour, the results would probably have been more satisfactory. Accordingly, Mr. Young, F.R.C.V.S., F.R.S.E., has recently conducted a supplementary investigation for the department, taking the temperature of the cattle at 12, 15, 18, and 24 hours after administering the dose. Out of 17 animals afterwards proved tuberculous he found that only 4 failed to react, and that of these the first had no active disease, whilst the other 3 presented a suspiciously undulating temperature suggesting that a larger dose might have proved diagnostic. The general conclusion is that the characteristic reaction is to be expected between the ninth and eighteenth hours after inoculation." (*Brit. Med. Journ.,* Vol. I for 1902, p. 980).

Veterinary Surgeon H. P. Clute of Marinette, Wis. writes on "The Tuberculin Test. Its use in Determining the Presence of Bovine Consumption." (*Amer. Vet. Rev.,* Vol. XXV, p. 531).

Dr. Bandelier of Cottbus, Prussia pleads for the obligatory use of Tuberculin for diagnostic purposes in sanatoria and hospitals, basing his opinion on his own private and sanatorium practice. He claims to have diagnosed tuberculosis in 80 per cent. of his cases in which the tubercle bacilli could not be found. He is one of those observers also who believes in not discharging a patient from a sanatorium or hospital until this test has been applied. (*Deut. Med. Wochensch.,* Vol. XXVIII, p. 357).

Dr. Brunzlow reports "A Case of Kneejoint Tuberculosis and its Treatment with Koch's New Tuberculin." His patient was a boy 14 years of age in which he made use of subcutaneous injections in increasing quantities. (*Deut. Med. Wochensch.,* Vol. XXVII, p. 672).

Dr. Dario Romani of Siena, Italy has made a study of 14 cases of sero-fibrinous pleurisy in which he used the Tuberculin reaction in the convalescent stage. (*Gaz. degli Osped. e delle Cliniche,* Vol. XXIII, p. 117).

Dr. Erwin Fischer of Pittsburg, Penn. relates a case of "Typhoid Fever Occurring in a Tuberculous Patient, and the Influence of

Tuberculin on this Condition." (*Phila. Med. Journ.,* Vol. 8, p. 197).

Urol is the name given to a Quinate of Urea and offered as an efficient agent for the treatment of gout and rheumatism. In preparing this article two molecules of urea are taken to one of quinic acid. It crystallizes in large prisms, is readily soluble in water and alcohol and shows an acid reaction.

The clinical reports are quite meagre as yet.

Urosin is the name given to a Quinate of Lithium, but has been little heard of as yet. One foreign observer Dr. Hönigschmied of "Weistrach" reports favorable results, relating his experience in a paper "On the Treatment of Gout by Urosin." (*Wien. Med. Blätter,* Vol. XXIV, p. 897).

Urotropin (Hexa-Methylene-Tetramin)—formed by the union of Formaldehyde and Ammonia—has lost none of its prominence during the past year.

Drs. A. Götzl and Gottlieb Salus of Prague, Bohemia dispute the claim of Prof. Nicolaier of Göttingen, Prussia that its efficiency as a urinary antiseptic is due to the splitting up of this agent and setting free the formaldehyde. (*Prager med. Wochensch.,* Vol. XXVI, p. 373).

Dr. George K. Swinburne of New York City in describing his procedure in "A Case of Litholapaxy under Cocaine" states that he administers as a preliminary treatment 500 milligrammes (7.7 grains) of Urotropin three times a day for three weeks, with irrigation of the bladder twice a week and the passage of the usual instruments. (*Journ. Cutan. and Genito-Urinary Diseases,* Vol. XX, p. 163).

Dr. Otto Sachs of Breslau, Prussia has been carrying on a series of "Experimental Investigations with Urinary Antiseptics" and concludes that Urotropin gives the best bactericidal results. The other agents used and in the order of preference were salicylic acid, oil of sandalwood, methylene blue, salol, balsam of copaiba, oil of turpentine and camphoric acid. (*Wien. klin. Wochensch.,* Vol. XV, p. 442).

Dr. R. Stern reports that he also finds that Urotropin and salicylic acid have a superior bactericidal power over the other agents. The doses he gave of Urotropin were from 3 to 4 grammes (46.3 to 61.7 grains). The other agents which he tried were salol, methylene blue, camphoric acid, oil of sandalwood and oil of tur-

pentine. All these however had to be used in very large doses to have the desired effect. He found that balsam of copaiba, boric acid, potassium chlorate and uva ursi had no action on bacteria. (*Allgemeine med. Central-Zeitung,* Vol. LXXI, p. 8).

Dr. W. F. Loebisch of Innsbruck, Austria claims from his investigations that Urotropin is an excellent intestinal disinfectant, and believes that he is one of the earliest to recognize this, for it has usually been confined to the genito-urinary tract. (*Wien. Med. Presse,* Vol. XLII, pages 1274 and 1330).

Dr. Ernst Fuchs of Prague, Bohemia reports "On the Action of Urotropin in Typhoid Bacteriuria" after a study of some 41 cases of typhoid fever. Only 34 per cent. of these showed bacteria in the urine. His belief is that its action is rather inhibitory than antiseptic. He appends a long list of references. (*Wien. klin. Wochensch.,* Vol. XV, p. 170).

Dr. Abraham Mayer of New York City relates a case of "Diabetic Coma: Symptoms, Pathology and Treatment" in which he makes use of Urotropin, and concludes as follows: "My reason for using urotropin in this connection is that it is a chemical combination of ammonia and formaldehyde, which in the presence of an acid splits up in the body into its component parts. The splitting up of this drug takes place in the kidney, the ammonia being rapidly absorbed by the kidney veins, thereby entering the circulation and neutralizing any acids that may be present, while the formaldehyde passes out with the urine.

I have only given you the results of a single case in which I have used this drug for the avoidance of impending coma. The results of one case are not sufficient to make any specific claim, and farther use in more cases will be necessary in order to prove the efficacy of this reasoning." (N. Y. *Med. Record,* Vol. 61, p. 370).

Dr. J. Albert Goldsmid of Murwillumbah, New South Wales relates two cases of hæmaturia following the use of Urotropin. He believes in small doses at the start but gradually increased. (*Australasian Med. Gaz.,* Vol. XX, p. 383).

Vioform (Iodo-Chlor-Oxy-Quinolin)—one of the numerous iodoform substitutes—has been very little heard of for the past two or three years, but during the past year two observers have reported.

Dr. Krecke of Munich, Bavaria claims that it is fully equal to iodoform and even better. Its lack of odor and non-toxic properties

even in large doses subcutaneously are considerable advantages. He uses the following proportions in the form of an emulsion:

Vioform.	5 parts
Glycerin.	20 "
Distilled Water Sterilized.	20 "
Alcohol.	10 "

He uses this on sterilized gauze. (*Muench. Med. Wochensch.*, Vol. XLVIII, p. 1310).

The other observer was Dr. James Eddy Blake of Bonn, Rhenish Prussia who relates some investigations in a paper entitled "Vioform: Researches Concerning its Properties with Especial Reference to its Possible Use as a Substitute for Iodoform in the Treatment of Tubercular Joints." (*Brooklyn Med. Journ.*, Vol. XVI, p. 429).

Weights and Measures by the **Metric System** as a topic of interest and discussion have been quite prominent during the past year. The ultimate adoption of the Metric System has been so far progressed that it has greatly agitated those who are still opposed to it. The most recent decided opposition was on the part of the engineers who see great confusion and trouble ahead, but some of those who have wavered in their opinion have become gradually convinced of the need of this System.

"A bill is now before Congress adopting the metric system of weights and measures as the standard in the United States. Though it does not seem likely that the bill will be passed during the present session it has been recommended by the committee on coinage, weights and measures, and the chances of its adoption seem more favorable than ever before. The bill requires the departments of the government to use the metric system after the beginning of the year 1904 and makes it the legal standard in the United States after January 1, 1907. The house committee has given a number of hearings on the subject, published in a pamphlet of 240 pages, and has drawn up a careful report. This report covers familiar ground, but in an unusually clear and straightforward manner. The attitude of Washington, Jefferson and Adams is referred to, and the history of the metric system of weights and measures is briefly reviewed. It is pointed out that the adoption of a decimal system of coinage in the United States was one of the strongest influences leading to the adoption of the metric system by France,

and that Great Britain and the United States are practically the only non-metric countries. The weights and measures of Great Britain and the United States are not identical as is generally supposed, and there is no chance whatever that either system will become a universal system. The metric system has become necessary for scientific work; it would decrease the cost and labor of education; it would give unity to our manufactures, and is almost necessary for the extension of our commerce. The admitted expense and trouble involved in the adoption of the system are less, as has been shown in other countries, than is feared, and in any case the longer the adoption is delayed the greater will be the difficulty. The scientific, manufacturing and commercial interests of the country are under great obligations to Mr. John F. Shafroth, who, as chairman of the house committee on coinage, weights and measures, has devoted much careful attention to the subject." (*Popular Science Monthly,* Vol. LXI, p. 185).

Those who are interested in having this Metric System promoted in this country should take pains to write to the representative in the Congressional District in which they reside, asking his efforts in behalf of the Bill which is "H.R. 123—Report No. 1701" of the 57th Congress, 1st Session. Various scientific bodies and associations interested have taken pains to urge all their members to lend assistance.

Several of the Medical Journals have decided to make use of the Metric System exclusively throughout the contents, and others have agreed to give the equivalents in the two systems, thus promoting interest and the gradual change.

Those who would desire to read further concerning this matter will find the following three articles of value: "The Metric System of Weights and Measures," submitted by Mr. Southard, from the Committee on Coinage, Weights and Measures. (*Science,* Vol. XV, p. 829). "Popular Dose Measures, and Their Relation to the use of the Metric System in Prescription Writing" by M. I. Wilbert of Philadelphia, Penn. as found in *American Medicine* (Vol. III, p. 276). "The Metric System of Weights and Measures in English-Speaking Countries" by M. I. Wilbert of Philadelphia, Penn. (*Amer. Journ. of Pharmacy,* Vol. 74, p. 411).

In England the question has been agitated much more energetically than in years past, and a so-called "Decimal Association" has been formed which is now doing active work.

The Decimal Association "has compiled a list of 162 Members of Parliament who have promised to support the introduction of the metric weights and measures into Great Britain. The Secretary to the Association points out that our chief competitors in foreign trade are Germany and the United States. The former country has already adopted the metric weights and measures (thereby scoring a great advantage over us), and there is a probability of the United States doing so very soon—in fact, two Bills were introduced into Congress last month with this object. In the interests of our foreign trade it is held to be most desirable that we should at once carry this reform into effect, as is proved by the constantly reiterated statements of British Consuls that we lose much trade because our weights and measures are not understood in countries where the metric system is in force. In Australia, Canada, and Cape Colony, the change would be welcomed, and, seeing how easily so serious an impediment to commerce can be removed, it is hoped that the Government will give more attention to the subject in the coming Session of Parliament than it has so far done." (*Pharm. Journ.*, Fourth Series, Vol. XIV, p. 52).

The Metric System has been under consideration for some months by a Committee of the Association of the English Chambers of Commerce, and this Committee has unanimously adopted the following resolutions: "(1) That, after considering various suggestions, this committee is unanimously of opinion that the Chambers should unite in urging upon the Government the compulsory adoption of the metrical system of weights and measures, leaving matters of detail to be considered later. (2) That the committee is unanimously of opinion that a British decimal system of coinage must be on the basis of retaining the sovereign, with the florin as a unit, divided into a hundred cents or farthings. (3) The committee recommends that there should be nickel coins of five and ten cents, and bronze coins of one, two, and four cents or farthings." (*Pharm. Journ.*, Fourth Series, Vol. XIII, p. 487).

This System has been actually "legalised in Great Britain, but yet virtually unknown to the great mass of the people resident in these islands. Attempts, not few, have been made to induce Governments and people to make a virtue of what should be a necessity, and, at the cost of a trifling inconvenience, enforce and practise a system the general use of which must obviously effect an enormous saving in time, labour, and money. So far, however,

the results have not been encouraging, and the metric system seems nearly as far off becoming a national institution as ever it was. The latest attempt to hasten an inevitable reform has been made at a general meeting of the Convocation of the newly-constituted University of London. On that occasion it was moved by Mr. W. Pringle and seconded by Sir Philip Magnus that a resolution should be adopted declaring that legislation should be promptly undertaken—in the interests of commerce, science, and education—to make the use of the metric system of weights and measures compulsory for all purposes in this country after a proper interval. The proposition was agreed to, and the Senate of the University requested to forward the resolution to the Board of Trade, the body which may be regarded as the supreme arbiter on the question, inasmuch as it must decide the feasibility of the proposal. Speaking in support of the motion, Sir Albert Rollit urged that the present terminology is prehistoric, the weights and measures in common use representing the hands, feet, and nails of our dead ancestors. There can be no doubt whatever, he added, that the non-adoption of the metric system is an impediment to British trade, and that the object to be pursued in this direction should be the union of the highest culture with the commerce of the present day. It is interesting to note, by-the-way, that Sir Albert Rollit is also taking the lead in moving for the establishment of a degree in commerce by the University of London." (*Pharm. Journ.,* Fourth Series, Vol. XIV, p. 73).

As a résumé of what has been done in the United States regarding the Metric System it may be of interest to quote here the following which was sent to the British Consul-General residing in New York, to be presented to his Government as coming from the National Bureau of Standards at Washington:

"In 1893, in accordance with the order of the Secretary of the Treasury, April 5, 1893, the metric prototype standards, the metre and kilogram, were adopted as the fundamental standards of the United States, from which the standard yard and pound were to be derived.

As you know, the international postal rates are based exclusively on the metric system, and all the larger offices in the United States are provided with metric scales.

Metric weights are used in the coinage of all the subsidiary sil-

ver currency. Our 5-cent. piece also is exactly 2 centimetres, and weighs 5 grams.

All the states and territories of the United States have been provided, by order of Congress, with carefully prepared copies of the metric standards.

Congress authorized the signing of the Convention of 1875, establishing the International Bureau of Weights and Measures, for the construction, care, and comparison of the metric standards.

As you are aware, the metric system has been for many years, and is to-day, the legal standard in Porto Rico and the Philippines.

In 1894 Congress adopted the international units of electrical measurement, which are based entirely upon the metric system.

From the above it will be seen that the United States have taken a long step towards the adoption of the metric system, and as far as their fundamental standards are concerned, they are to-day upon a metric basis. Among the associations favouring the system are the National Board of Trade of the United States, the American Steel Association, the American Export Association, the American Institute of Electrical Engineers, the New England Cotton-manufacturers' Association, the National Association of Builders, the American Chemical Society, the American Medical Association, the National Academy of Sciences, and the American Metrological Society." (*Chem. and Drug.,* Vol. LXI, p. 658).

The following newspaper report comes from Australia.

"MELBOURNE, Victoria, April 4.—The Decimal Coinage Committee's report has been submitted to the Federal House of Representatives. It recommends the adoption of the decimal system, based on the sovereign; deprecates the establishment of a Commonwealth Mint, and recommends that branches of the Imperial Mint supply the coins, and that the Commonwealth receive seigniorage on silver and copper." (*The N. Y. Evening Post,* Friday April 4th, 1902).

Under South American notes the following comes through England from a correspondent in Paraguay, South America.

"The writer of these lines was in Paraguay on January 1, 1901, when the decimal system came into use. The previous weights and measures were almost identical with those now in use in Great Britain and Ireland. The Paraguayans are for the most part illiterate, and slow to adopt any innovations. During January

there was a good deal of complaint and difficulty in adapting themselves to the new circumstances, but in less than two months they had become thoroughly accustomed to the change, and even learned to prefer it to the antiquated and cumbrous system formerly in use. These remarks apply to the lower classes; among the upper classes there was still less delay in accommodating themselves to the new circumstances, and now no one wishes to go back to the old system, since the advantages of the new one are abundantly manifest. These remarks are made in view of the opinion, apparently held by many people in England, that the adoption of the decimal system would entail an enormous amount of inconvenience, and that a great length of time would be necessary before the public could accustom themselves to the altered circumstances. One thing is certain: that the decimal system will never come into general use in England until it is made compulsory; to make its use merely optional is worse than useless." (*Chem. and Drug.*, Vol. LIX, p. 1051).

Xeroform (Tri-Brom-Phenol Bismuth)—one of the substitutes for Iodoform—has received practically no attention in the current medical literature of the past year, except in the way of repetition of old matter.

Yohimbin (Johimbine)—an alkaloid obtained from the bark of the Cameroon tree (johimbehe) growing in the region of the German colonies in Africa—has received less attention during the past year than previously.

The only observer of prominence recording his experience is Dr. A. Eulenburg of Berlin, Germany who writes on Subcutaneous Injections of Yohimbin (Spiegel). He claims that his experience has now been quite extensive and that it is a very reliable agent in the treatment of neurasthenic impotency. He recommends a 2 per cent. solution and warns observers that the solution decomposes readily and therefore should be kept away from the light and in dark amber bottles. A few drops of chloroform added seems to retard the decomposition. He begins with as small an injection as $\frac{1}{2}$ Cc. (8.1 minims) daily. This he injects into the inner surface of the thigh, and rapidly increases to 1 Cc. (16.2 minims). (*Deut. Med. Wochensch.*, Vol. XXVIII, p. 402).

NOTE.

Future issues of this pamphlet will be sent, without charge, to those interested, by sending their name and address to

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